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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1990 AND 1991

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

S. 1085

AUTHORIZING APPROPRIATIONS FOR FISCAL YEARS 1990 AND 1991 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEARS FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 5
CONVENTIONAL FORCES AND ALLIANCE DEFENSE

MAY 4 AND JUNE 6, 1989

JOINT HEARING
CONVENTIONAL FORCES AND ALLIANCE DEFENSE
READINESS, SUSTAINABILITY, AND SUPPORT
MANPOWER AND PERSONNEL

MAY 16, 1989

Printed for the use of the Committee on Armed Services

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1990 AND 1991

THURSDAY, MAY 4, 1989

U.S. SENATE,
SUBCOMMITTEE ON CONVENTIONAL FORCES
AND ALLIANCE DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

IMPLEMENTATION OF THE ARMY'S ARMOR AND ANTI-ARMOR PROGRAMS

The subcommittee met in open session, pursuant to notice, at 2:03 p.m., in room SR-222, Russell Senate Office Building, Senator Carl Levin (chairman of the subcommittee) presiding.

Committee members present: Senators Levin, Dixon, Shelby, Thurmond, Wilson, and McCain.

Committee staff member present: Daniel G. Sakura, research assistant.

Professional staff members present: John J. Hamre and William E. Hoehn, Jr.

Minority staff members present: Romie L. Brownlee, deputy staff director for the minority; George W. Lauffer and Durwood W. Ringo, Jr., professional staff members.

Staff assistants present: Lisa Hastey and Cindy Pearson.

Committee members' assistants present: Kenneth N. Luongo, assistant to Senator Levin; Charles C. Smith, assistant to Senator Dixon; Milton D. Beach, assistant to Senator Glenn; Terrence M. Lynch, assistant to Senator Shelby; Dudley Carlson, assistant to Senator Wilson; Anthony H. Cordesman, assistant to Senator McCain; Charles Pearcy, assistant to Senator Lott; and Eric H. Thoemmes, assistant to Senator Coats.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator LEVIN. The Subcommittee on Conventional Forces and Alliance Defense meets to receive testimony on the status of the implementation of our armor and anti-armor programs.

This hearing continues the major investigation launched by this subcommittee last year. Last year the subcommittee found that our armor/anti-armor capabilities had eroded dangerously compared to the forces of the Soviet Union. One witness acknowledged that, were war to break out tomorrow, our anti-tank missiles would literally bounce off Soviet tanks.

This year the Armed Services Committee has held several hearings on the implications of the Gorbachev unilateral force reductions which were announced at the United Nations. Several important themes emerged from those hearings.

First, during the last 10 years the Soviet Union has manufactured an average of 3,500 tanks a year. Parenthetically I should note that this is three times the production capacity of our production facilities. Even if the Soviet Union cuts back tank production, it will still manufacture between four and five times more tanks than we will. Our tank is the only land-based weapons system that we now have which can defeat Soviet tanks.

Second, even if Gorbachev removes 10,000 tanks from Soviet forces in Eastern Europe and the Western Soviet Military District, they have still significant—the Soviets do—a significant quantitative advantage. More important—and this is the subject of the hearing—we will still confront the qualitative erosion that has occurred during the 1980s.

Third, most experts believe that if the Soviet Union does cut back its forces and does lower production rates on weapons systems, it will still likely accelerate its research and development to advance the quality of its forces in the future.

These developments suggest that we must maintain a high priority on our efforts to reverse the deterioration of the armor/anti-armor balance and regain our qualitative edge. This is especially important as we enter conventional arms control talks in Vienna. If we are to have smaller forces in the future, we must have qualitatively superior armor and anti-armor forces.

We are delighted to have with us today and to welcome to the committee three witnesses, Lt. Gen. Donald S. Pihl, Military Deputy to the Assistant Secretary of the Army for Research, Development, and Acquisition; Maj. Gen. W.A. "Dutch" Shoffner, Assistant Deputy Chief of Staff for Operations and Plans, who is the senior Army officer responsible for integrating the Army's warfighting doctrine with the new equipment that is being developed; and Maj. Gen. R.M. Franklin, the Deputy Chief of Staff for Research, Development, and Studies of the Marine Corps who will review the Marine Corps armor/anti-armor programs.

Before we call on our witnesses, let me call on my good friend and colleague, Senator Wilson, to see if he has an opening statement.

Senator Wilson. Thank you, Mr. Chairman. I would ask a little indulgence as a matter of personal privilege. This is the first opportunity that I have had as a new member of this committee to express my great pleasure and the sense of anticipation that is mine in working with you.

Your expertise in the area of conventional warfare is well-known. I think that you have contributed greatly to the recent improvements in our conventional forces and I think you deserve great credit for the determination and enthusiasm with which you have sought those changes. I look forward keenly to the even closer association and the opportunity to work with you and the other members of the subcommittee in an area that in my judgment is assuming ever-greater importance.

I am particularly pleased that we have the distinguished panel of witnesses before us who are our guests today because this is a subject that I think deserves critical attention. Virtually anywhere our forces may be likely deployed today there is the high probability that they will face a very capable enemy with an extraordinary armored capability. Of course, in the event that we were to face the outbreak of hostilities on the plains of Western Europe, we would be up against the largest and the most sophisticated armored army in history very likely.

The Soviet Union has essentially built its army with the tank as its centerpiece. Our ability to cope with armored armies of the Warsaw Pact is key to our ability to execute a successful defense of Western Europe.

I think we all understand that we really could not and should not try to match the Soviets tank-for-tank. They will continue to outnumber us. But I think just as clearly we must maintain a clear qualitative edge both in time and in the effort to develop both the tank and the anti-tank weapons that are necessary to do so.

I am particularly encouraged by the Army's plans for modernizing its heavy forces and I will be eager to hear from General Pihl and General Shoffner about that. We must not overlook the infantry. I have some bias in that respect, I will confess, both in the Army and in the Marine Corps.

In terms of anti-armor, the armor/anti-armor equation, the initial information on the AAWS-M is encouraging. I want to hear a good deal about the replacements for the heavier missile system, but I am also keenly interested in the lighter individual anti-armor systems that I expect we will be focusing on today and henceforth.

There was an article by John Fialka titled, "Long Search for a Better Bazooka Frustrates Military," in the May 2 Wall Street Journal. I would like to hear from each of our panelists today concerning what we can do about a better shoulder-fired or rifle-launched individual anti-armor weapon.

Mr. Chairman, again, I commend you for your initiative and look forward to hearing from the panel.

[The article referred to follows:]

[From the Wall Street Journal May 2, 1989]

LONG SEARCH FOR A BETTER BAZOOKA FRUSTRATES MILITARY

(By John J. Fialka)

QUANTICO, VA—Why are Quantico's young Marine lieutenants learning to fight heavy tanks with homemade concoctions of gasoline, Styrofoam packing peanuts and soap powder?

Such "expedient methods"—the military term for tactics demanded by the absence of an effective weapon—are back in vogue among some specialists in the arcane art of destroying heavy tanks closeup. Despite the U.S.'s expenditure of hundreds of millions of dollars to develop manufactured anti-tank weaponry, nothing else seems to work as well as updated versions of the Molotov cocktail and other improvised means.

"At Molotov cocktail range, they"—the tanks—"are yours," says Major John F. Kelly, who helps train the Marines in a new course that borrows World War II tactics.

THE BAZOOKA IS BORN

The military has searched long and generally fruitlessly for an effective hand-held anti-tank weapon cheap enough to issue to every infantryman. The search makes a curious footnote in the annals of warfare. When the U.S. has found a superior tank-killer, as it has in three major wars, it usually has been of enemy design.

The search had an auspicious and inexpensive beginning in the late 1930s. That was when Army Lieutenant Leslie A. Skinner started fiddling with a shoulder-fired rocket launcher in his basement. When World War II began, the Army grabbed the idea and spent $10,000 to develop it. The fabled bazooka was born. The Army cranked out 476,620 bazookas and sent them to the field.

There was one flaw. The bazooka's warhead was too small to penetrate the front armor of Germany's heavy Tiger tanks. Gen. James M. Gavin later reported the grisly consequences when his soldiers with bazookas stood up to tanks. "Many of them had pieces of bazookas ground up in them by tanks as they were crushed," he wrote.

Gen. Gavin, in his book "On to Berlin," also told how his airborne troops did destroy tanks in crucial battles, including the Battle of the Bulge, with an anti-tank weapon captured from the Germans. It was the *Panzerfaust,* a bazooka-like rocket launcher with a more powerful warhead.

FRUSTRATION IN KOREA

The Army remained unimpressed. In 1950, as the first North Korean tank column rolled into American troops, GIs fired at them with World War II bazookas. "Nothing happened!" says Carl Bernard, a retired Army colonel. He remembers a unit that scored 22 tank hits "without stopping anything."

Mr. Bernard, a lieutenant at the time, failed to stop his own troops from panicking. Many were gunned down as they ran away. Mr. Bernard got so angry that he became a pioneer of "expedient" means. He and a sergeant stopped one Korean tank by firing 15 rifle shots into its porthole. Another exploded after he climbed atop it and poured gasoline onto its hot engine compartment.

After the Korean War the Army went on to develop the light anti-armor weapon, a disposable rocket launcher that fired a missile with a warhead about the size of the bazooka's. During the Vietnam War, U.S. troops often rejected it in favor of a heavier rocket launcher with a bigger warhead used effectively by the Viet Cong.

Upon examination, the enemy weapon, called the RPG–7, turned out to be little more than a Soviet copy of the old German *Panzerfaust.* Gen. William Westmoreland, the commander of U.S. forces in Vietnam, sent an RPG–7 back to the Army's weapons bureaucracy along with an order to copy the weapon for his troops. That halted development of any new weapon.

Ultimately, however, the Army bureaucracy rejected the idea of copying the RPG–7 and returned to a more futuristic prospect, the Viper. This was to be the ultimate anti-tank weapon: so simple, light (seven pounds) and cheap ($72) that every infantryman could carry one.

That was the Army's plan in 1972. It was abandoned in 1983, by which time the cost of the Vipers had soared to $793 a copy. The Army had invested $100 million in it, but it still couldn't kill a tank.

The Army then surrendered to demands from Congress to buy a Swedish anti-tank weapon. It couldn't stop modern tanks, either, but the Army bought it anyway and reclassified it as a light anti-armor weapon.

Of course, American troops could roll out the big guns against the onslaught of enemy tanks, but therein lies another problem. From World War II data, planners learned that most attacks on tanks took place within 200 feet of the vehicles, on rolling European terrain with the line of sight often not much beyond that. But the Army's current medium and heavy antitank weapons, the wire-guided Dragon and TOW missiles—are powered by rockets that take at least 300 feet to stabilize before they can be aimed.

No matter, current Army doctrine holds; enemy tanks won't get that close. "We want to try to keep the Soviets at as long a range as possible," say Col. Earl W. Finley, project manager for advanced anti-tank weapons at the Army's Missile Command in Huntsville, Ala. This can be accomplished, he says, because "we're going to allow the soldier to kill the tank before the tank gets in close and kills him."

The current best hope lies in the AAWSM, an automated, radar-guided missile that the Army says can kill tanks at ranges beyond a mile. If it works, it is scheduled to be ready by 1994. Not all troops will get one, however; the 45-pound weapon will be too expensive, though the Army has yet to announce its exact cost.

This dismays planners who believe that light anti-tank weapons should be standard issue for infantrymen. "How do you maintain the confidence of units near the front knowing that they might encounter tanks?" asks a Defense Department official who has tried repeatedly to persuade the Army to maintain its search for an inexpensive weapon. "A few of them are going to trickle through. Those onesies and twosies can raise havoc unless you can deal with them at close range."

The Marines don't need any convincing, according to Maj. Kelly, who has designed the new course for officers' basic training at Quantico. The course is based on World War II training films—German army films, that is. The films suggest that "expedient methods" are nothing to sniff at. The Germans, after all, destroyed 14,000 Soviet tanks without using anti-tank weapons.

In one exercise Maj. Kelly has his trainees huddle in trenches as two columns of diesel-belching M-60 tanks approach from a nearby woods. "When you hear that sound, think about your Marines," he shouts over the approaching roar. "You'll be able to see them because about 10 percent will be up and running. It is suicide to run in front of a tank."

But get within 60 feet of a tank, and it can no longer point its gun at you. Get within 30 feet, and the poor visibility inside the tank prevents its gunners from seeing you, Maj. Kelly explains as the tank columns brush by his trainees on either side.

Soldiers in German training films put explosive charges on tanks as they passed by. Some of them even climbed on the turrets and stuffed rocks down the gun barrels. "These were obviously desperate means, but at the same time they were done routinely by infantry," Maj. Kelly says.

He has included some recipes concocted in America's own desperate and stumbling, but sometimes innovative, battles against tanks.

With a bomb made of plastic explosives and a large quantity of chicken manure, it is possible to blow a giant, tank-stopping pothole in the road. A plastic bag filled with a jelly-lined mixture of gasoline and soap powder and a couple of grenades can be lobbed onto an approaching tank. Then there is the spectacular "Eagle Fireball," a thick mixture of Styroform peanuts and gasoline in a 10-gallon can placed atop a small anti-personnel mine.

When the tank goes by, the mine is triggered, flipping the blazing, gelatinous mass onto the tank, where it deprives the crew of oxygen, eventually seeps into the engine compartment and stops the tank.

The size and ferocity of the homemade Eagle Fireball explosion seems to boost the morale of Maj. Kelly's men after their day of being terrorized by "enemy" tanks. "God I love this!" a trainee gasps as the fireball fills the sky.

Senator LEVIN. Thank you, Senator Wilson. We look forward to your being our ranking Republican on this subcommittee. You have made a major contribution to the full committee, and we look forward to your joining us on this subcommittee as the ranking member.

Senator WILSON. Thank you, Mr. Chairman.

Senator LEVIN. Senator Shelby is next. Dick, it is good to have you with us.

Senator SHELBY. Mr. Chairman, I want to commend you again for your leadership in the area of conventional weapons. I served on your subcommittee in the last Congress. I believe you brought a lot of leadership here and I am looking forward to continuing to work with you.

Today I am interested in everything you have to say, but I am particularly interested in where the Army is going, if anywhere, in dealing with the FOG-M in an anti-armor role. I think there have been a lot of experiments in that area and I think that it is a system that offers a lot of hope, not only against helicopters, but it looks to me like you are neglecting the anti-armor role there. Perhaps you are not, but I would be interested in your comments because I do not think we should go back on technology.

Thank you, Mr. Chairman.

Senator **Levin**. Thank you, Senator Shelby. We are delighted you are back with us again.

Senator Dixon has submitted a prepared statement for the hearing record which shall be included at this point.

[The prepared statement of Senator Dixon follows:]

Prepared Statement of Senator Alan J. Dixon

I am pleased to welcome our distinguished witnesses as this committee again this year reviews the Army's armor and anti-armor programs. The Army is working on a number of programs to upgrade their declining anti-armor capability and I am anxious to learn if any significant progress has been made in any of these programs. I am also pleased that these programs were not reduced during the amended budget process.

Progress in our anti-armor programs is critical because of our declining ability to defeat an improving Soviet armor force. As it now stands, our forces are equipped with far too many anti-tank weapons—weapons that are virtually incapable of stopping a Soviet armor attack. This inability is likely to continue into the mid-1990s, until we can field new anti-armor weapons and an acceptable number of M1A1s with enhanced armor.

Considering that we will not be able to redress the imbalance until the mid-1990s, it simply does not make sense to eliminate the Apache Attack Helicopter Program which would help carry us through the early 1990s until new anti-armor weapons will be available. Continuing with multi-year procurements of the Apache will also permit us to save $88 million in the 1990–91 budget and allow us to equip seven attack battalions, primarily in the Guard and Reserve Forces. Cancelling the program would also damage our chances of selling the helicopter to our allies.

I strongly support the Apache program. Despite killing the program, the Army budget request does not have adequate funds for the programed purchases in the amended 1990–91 defense budget. At the very least, I will seek to ensure that funds are adequate for programed purchases and I continue to argue for a continuation of the program.

I am also troubled by a May 2 Wall Street Journal article that says our search for a light-weight anti-armor weapon has faltered so badly that the Marines are now relying on "molotov cocktails" to stop a tank advance and that Marines are learning how to employ it! Congress has authorized funds for the Army to purchase the new light-weight AT–4 anti-armor weapon, but the Army has decided to halt their purchase on the AT–4 far short of their goal to have over a million in their inventory. Why? Is the Army, like the Marines, using molotov cocktails to kill enemy tanks instead of the best modern weapon currently available?

Clearly, the anti-armor program is a central issue facing this committee. We have an opportunity here today to examine this program thoroughly and I look forward to the testimony of our expert witnesses.

Senator **Levin**. Welcome, General Pihl. Would you proceed, please.

STATEMENT OF LT. GEN. DONALD S. PIHL, MILITARY DEPUTY TO THE ASSISTANT SECRETARY (RESEARCH, DEVELOPMENT, AND ACQUISITION), U.S. ARMY

General **Pihl**. Mr. Chairman, General Franklin, General Shoffner, and I are pleased to be here with you today. We would like to talk about armor/anti-armor, and if I may, sir, I would like to enter my full statement for the record and paraphrase.

Senator **Levin**. Thank you. It will be made part of the record.

General **Pihl**. The Army is still behind in armor/anti-armor, but we have identified a course of action that will deal with the imbalance. The Army needs sustained funding for armor and anti-armor. As a result of the Intermediate Nuclear Forces Treaty, there is a higher premium on conventional forces. We have put together an armor/anti-armor plan which improves our existing missiles and tank ammunition, accelerates the development of our future anti-tank systems to include the AAWS-M, and modernizes our first-to-fight forces.

Our plan calls for a continuance of production of the M1-A1 tank—603 in 1990 between the Army and the Marine Corps; initiates a second multi-year contract for the Abrams; produces the Bradley Fighting Vehicle system at 600 per year; the TOW-2A modernized missile system at 9,500; between the Marine Corps and the Army, 4,200 Hellfires in the 1990 budget request; and the 120 millimeter AEI tank ammunition program for the tank. We are commencing full-scaled development on the Block II tank and we would like to procure long lead items for the M1-A2 for delivery in 1992. There will be no further outlays by the Army for the M-60 series tank or the AH-1 Cobra helicopter.

In lethality improvements we are doing research and development on an advanced tank cannon or an electrothermal or electromagnetic cannon, kinetic energy munitions to include our Armament Enhancements Initiative for tank bullets; and the hypervelocity missile system, our overmatch capability.

In terms of protection improvements, we have survivability enhancements for Abrams, including more modern armor packages to go into Block II and eventually Block III. We have made modifications to the Bradley fighting vehicle to reposition the ammunition, put in a spall liner and put on high-hard steel applique armor to protect us against the 30 millimeter gun of the Soviets.

We have taken a combined arms approach to armor/anti-armor to include Hellfire on the Apache, the Bradley Fighting Vehicle with TOW-2A and TOW-2B in the future, the Abrams tank, mines, and indirect fire munitions improvements.

Not counting the cost of aircraft, out budget request includes about $5 billion for armor/anti-armor, or one-fourth of the appropriations which I manage.

We have extended the M1 buy out to 10,000 plus, as opposed to the original 7,000 number at the start of the 1980s. We will expand the M1 fielding to the National Guard.

The Block II M1 tank is the pathway to Block III. This is where we do the electronics, the data architecture, and the ammunition upgrades to the tank that keep it current with the threat.

As we look at the Block II tank being the pathway to our Heavy Forces Modernization Plan, we have initiated a very vigorous tech base program. We have $186 million in the 1990 budget request which features in R&D tech-base common components, four heavy protection vehicles, and two medium protection vehicles which we think, in the 1997 to 1998 timeframe, will achieve O&S cost savings, give us an improved cannon, improved propellants, improved survivability, improved propulsion, improved suspension and track, and an item we call vetronics which is avionics applied to track vehicles.

I would like to emphasize four points about the Heavy Forces Modernization Plan: First, advanced technology is vital to countering the threat; Second, the budget in 1990 and 1991 for heavy forces is in the tech base; third, we are not yet to full scale engineering development on the Block III tank; and fourth, today's investment is critical to tomorrow's technology and our tech-base program and heavy force mod supports an alternative force mod strategy which we will be happy to deal with in the questions.

Before we begin the questioning, I will ask my colleague, Maj. Gen. Dutch Shoffner, to comment on the threat and the user view of our need to modernize, followed by Maj. Gen. Ray Franklin with remarks on the Marine Corps program.

[The prepared joint statement of Lieutenant General Pihl and Major General Shoffner follows:]

STATEMENT BY
LTG DONALD S. PIHL
MILITARY DEPUTY TO THE
ASSISTANT SECRETARY OF THE ARMY
FOR RESEARCH, DEVELOPMENT AND ACQUISITION
AND
MG WILSON A. SHOFFNER
DIRECTOR OF FORCE DEVELOPMENT

Good morning Mr. Chairman and members of the committee. It is a pleasure for us to appear before your committee to update you on Armor Anti-Armor or A-Cubed as we have all come to call it.

Over the past decade the U.S Army, with the support and assistance of the Congress, has pursued the largest peacetime modernization program in our history. We have dramatically increased our warfighting capabilities. During the same period the Soviets have been engaged in an even more aggressive modernization effort. In comparison to what we have fielded, they have turned out almost nine times as many artillery pieces, five times as many surface to air missiles, over three times the number of tanks and twice as many helicopters. While this has resulted in even further increases in their numerical superiority, they, more importantly, have reduced and in some cases reversed the qualitative advantage we had held.

Last year, before this Committee, I testified that it was clear that in the Armor Anti-Armor arena we were now behind. Today we are still behind, however, I believe we have arrested the technological insufficiencies resulting from the Soviet advances and are pursuing a decisive course of action which will ultimately provide us a decided advantage in this crucial area.

Last year you also heard testimony on the 1985 Defense Science Board from one of its Co-Chairmen, General Donn Starry. We appreciate the focus that came from this effort and have responded to their findings. The major activity coming out of the DSB is the Army/DARPA/USMC Joint Program Office. So far the deliverables from this project include new warheads, new threat targets, new metals research, chemical overmatch of reactive armor, contractors competing in new armors, the x-rod concept, rods for hyper velocity flight, hydrocodes for technology modeling, pursuit of electromagnetic and electrothermal technology, and a firmex X-ray facility, to name some. We need your support to continue this important joint work.

Let me now address some of the specific actions we have taken in the Army, since I testified last year, and those we plan to take on some of our major systems. First and foremost we have, despite enormous pressure for budget reductions, successfully sustained our budget committment to A3 associated RDA in the $4.5 to $5.0 billion a year range. Regarding specific hardware adjustments, we have increased the procurement goal for our most modern tank killing systems. We will continue to procure the M1 Abrams tank well beyond the original quantities we had sought (in excess of 9000 vice the previously planned quantity of approximately 7000); the M2 Bradley Infantry Fighting Vehicle and the M3 Cavalry Fighting Vehicle will also continue in production. And the AH64 Apache Helicopter will remain in production through 1991 resulting in a total production quantity of 807; while this is fewer than we had hoped to procure prior to the budget reductions, it is still well above the original procurement goal of 675.

Second, we are improving the lethality of the kinetic energy tank bullets and the chemical energy missiles, both TOW on Bradley and Hellfire on Apache. For the M1 tank with the 120mm smooth bore gun we have deployed the M829 round with a depleted uranium long rod penetrator which improves kill performance. Soviet reactive armor, which is designed to protect against chemical energy missiles, offers only its mass as protection against kinetic energy bullets. This means that the explosive in a reactive armor box, while effective against unitary missile warheads in older TOW and Hellfire, will not stop our best tank bullets.

For our chemical energy missiles we have a range of ongoing aggressive activities. TOW 2A is a switch to tandem warheads. The precursor charge causes the reactive armor to explode without harming the main warhead chemical energy "jet" formation. The jet, once formed, proceeds through the area behind the reactive armor box and defeats the target. Also for TOW, we are developing TOW 2B which is a top attack weapon that will avoid the thicker frontal aspects of the target. For Hellfire we are installing a precursor charge like TOW 2A in order to spoof the reactive armor into firing while the Hellfire "jet" defeats the target tank.

On the survivability side of the equation, we have deployed the M1 with heavy armor and are pursuing product improvements to Bradley survivability which are an outgrowth from live fire testing.

The future key to modernizing the heavy forces is the preplanned product improvements to the Abrams tank called Block II. The Block II tank improvements (M1A2) increase the warfighting capability of the tank by freeing the commander to hunt for targets independent from the gunner. The crew will perform this "hunter-killer" function utilizing the improved commander's weapon station and the commander's independent thermal viewer. The rate at which the Abrams Block II will find and kill targets is increased because the current fire control computation devices are replaced by a modern high speed data bus (1553) with signal processing, data display screens and electronics control units that rapidly compare and show the fire control solution to the commander and gunner. The full vehicle data base is redundantly stored in the hull and turret of the tank as a means to increase protection from live fire. The Block II improvements also change the rangefinder technology. We will introduce a rangefinder that is on par with the forward looking infrared (FLIR) sight at the gunner's and commander's position. If we can see the target, we will be able to range to it. Finally, Block II improves survivability by increasing armor protection and by rewiring the tank to reduce its vulnerability to live fire.

While these current adjustments to our tank, infantry, and aviation capabilities are ongoing, we are also continuing to develop a key system for the light forces and dismounted soldiers.

The Antiarmor Weapon System-Medium (AAWS-M) is a key force multiplier. AAWS-M is the missile which replaces the outdated DRAGON and will kill a modern tank by employing a top attack kill mechanism. At less than 45 pounds, this single-man employable system is invaluable to our light forces and will also be used to thicken the heavy forces since it will be with Bradley crews for use in built-up areas, woods, and close terrain. The AAWS-M is capable of launch from an enclosure and will solve the Army's requirement for military operations in urban terrain (MOUT). Since I last appeared before this committee we have selected a system using fire and forget technology and will move into full scale engineering development this year. This system, when deployed, will give our infantrymen a level of both lethality and survivability never before enjoyed by any dismounted soldier engaged in an anti-tank role.

Turning to the management of our efforts, let me discuss our planned process to catch-up, achieve overmatch, and eventually stay ahead of Soviet armor/antiarmor developments. In support of this effort the Army has developed a family of modernization plans, five of which are directly related to Armor Antiarmor. First, there is the A3 Modernization Plan which is a functionally oriented plan to improve warfighting capability for the Total Army in the near, mid and far term. Second is the plan to modernize our Heavy Forces. Third is the Aviation Modernization Plan which addresses helicopter antiarmor capability. Fourth is the Fire Support Modernization Plan which addresses all artillery systems and missions, to include counterfire which was a major concern of the 1988 Defense Science Board Summer Study on Countering Soviet Fire Support Systems. And finally the Tech Base Master Plan which focuses technology on the armor antiarmor issue.

In 1988 I told you our Chief of Staff, General Vuono, had just chartered an Armor Anti-Armor Special Task Force. The task force has been in being now for almost a year. Their key deliverable is the A3 Modernization Plan; they will also develop a transition plan to pass responsibility for A3 modernization to the Army Staff, both of which we expect within the month. One of the Army force modernization principles adopted by the task force is the overriding need for continuous modernization of the "first to fight" units at a rate competitive with expected Soviet modernization. In sum, we must modernize Force Package I at a 5 to 6 year pace to counter the Soviet's complete modernization of their strategic echelon, which occurs at a 7-year pace; thus, our plans maintain the qualitative edge in our "first to fight" units. By then using displaced equipment to subsequently upgrade Force Packages II and III, we continually modernize our total force inside the Soviets' modernization cycle. This warfighting imperative demands a well focused technology base which provides technology packages ready for system development every 5 to 6 years. Concurrently, this approach requires full scale engineering development (FSED) of a new or block improved system so that it is ready to be fielded at the same frequency. Finally, the strategy requires a constant, or level, quantity of procurement funding so as to buy-out quantities needed to equip top priority units every 5 to 6 years.

Having established the modernizing by thirds concept and the Block II tank as a starting point, an explanation of the refocus of the technology base to support Heavy Force Modernization is appropriate. Basically, the Army intends to execute an innovative acquisition strategy to field a heavy force with maximum warfighting capability, within affordable resource limitations, and to do so before the threat's research, development and acquisition cycle will permit them to react. To do this our management must be characterized by extreme creativity; we must adopt unique, procedures while following thorough management practices prescribed in the DOD acquisition regulations. Throughout this endeavor we must be faithful to the R&D process and be willing to accept a degree of developmental risk. We will focus our tech base, accept and adopt the realities of the day while pursuing the possibilities of the future, and above all, accelerate the pace of technology insertion. We will capitalize on the economies and flexibility of commonality, rely on the innovativeness resulting from open competition in the private industrial sector, and, most importantly, we will be proactive.

Let me expand on each of these points. The foremost unique management practice to be employed in the development of the systems in the Heavy Force Modernization is the use of Advanced Technology Transition Demonstrators (ATTD's) in lieu of performing Demonstration/Validation phases.

The 1987 Defense Science Board (DSB) Summer Study on Technology Base Management found that DOD and industry are deficient in rapid technology transition into systems and products. It went on to say that this situation is a primary contributor to the growing crisis in military competition as Soviet weapons' system performance approaches and, in some cases, exceeds that of the U.S. and our Allies. Because we can anticipate general numerical inferiority relative to the East Block, the situation could be disastrous unless the problem is corrected or reversed by our technological advantages. We cannot, nor should we, match the Soviets weapon for weapon or dollar for dollar; however, we must achieve and maintain a credible military force capable of carrying out our worldwide missions. The greatest opportunity to accomplish this objective is to rapidly accelerate the transition of technology to existing or emerging systems. The DSB recommended careful selection and timely execution of systems and major sub-system ATTD's to build and test experimental systems in a field environment. To continue to perform materiel acquisition in the old, heel-to-toe fashion would result in the development time being extended several years and the cost being substantially higher, than by preceding FSD with an Advanced Development Phase consisting of ATTD's. Given the emerging and growing threat and dollar constraints, we cannot afford to do "business as usual" as we go about the modernization of our vital ground combat forces.

In support of this approach we will focus our tech base to maximize efficient utilization of resources to accelerate demonstrations of critical technology. This will provide necessary information on technology maturity, integration issues and operational potential of competing technologies. Additionally, we are not going it alone; we have entered into a Memorandum of Understading with DARPA and the U.S. Marine Corps which provides for a five year joint technology program in armor antiarmor. This program's objective is to enhance the armor antiarmor technology base in the U.S., to include industry and the DOE national labs, and to provide a competitive mechanism to encourage application of that knowledge to products that advance U.S. military armor antiarmor capabilities relative to those of the Soviets. Intuitively, this is a smart thing to do. The threat seen for the remainder of the 20th century and beyond demands action today within existing technological capability.

In order to approach the reality of the projected fielding of the Future Soviet Tank II (which will be a very tough and lethal target) we have Abrams Block II. Beyond FST II will be a "turn of the century tank" which we will counter with Block III. To meet that and other threats we are putting together a plan to modernize our heavy force by developing a family of six vehicles which will, when fielded, solve our key heavy force insufficiencies between now and 2005. The companion driver to future Soviet tanks is the reality of Soviet artillery. We are outgunned, outranged, outdone in throw weight, and face massive Soviet preparatory fires in any future central battle. Therefore, the Heavy Force Modernization Plan treats not only the tank but the other parts of the combined arms mounted force that need to materialize between now and the year 2000.

We have selected six vehicle concepts for technology demonstration and competitive development. They are the tank, the infantry fighting vehicle, the howitzer, the combat mobility vehicle, the line of sight antitank system, and the ammunition resupply vehicle. For our purposes here today I will discuss only the Block III tank and the Line of Sight Anti-tank or LOSAT.

We have programmed into the Heavy Force Modernization Plan a range of options for the decision maker. The concept is to develop a common heavy chassis with special armor protection for the tank, the infantry vehicle, the howitzer and the combat mobility vehicle. For the line-of-sight antitank and ammunition resupply vehicles, we will employ the current Bradley chassis with medium armor protection.

In order to flesh out the Heavy Force Modernization Plan concept, we start with the tank. The tank that follows Abrams Block II can either be a third block of product improvements to the M1 or a new tank. Whether or not it is a Block III to the current chassis or a new tank, we need to start fielding such a machine by 1997 in order to offset future Soviet tank developments. The improvements to the tank envisioned are a new gun, countermeasure technologies, autoloader, advanced power pack, improved track and suspension, weight reduction (from 70 tons to a 55 ton goal) and introduction of modular armor to improve survivability.

The chassis development for Block III has two dimensions. First, we have always planned to upgrade the tank beyond Block II. That is why there is a test bed Abrams chassis at the TACOM laboratory where the various turrets and fighting compartments can be demonstrated. In parallel to the test bed is competitive development of the Advanced Technology Transition Demonstrators (ATTD), where the three contractor teams that supported the AFV Task Force can now shift their work. eventually, the fighting modules from the test bed will be integrated into the chassis from the technology demonstrator as each vehicle takes shape.

It takes roughly 1000 armored systems to modernize a heavy division counting floats and war reserve. Within a level funded Weapons and Tracked Combat Vehicle (WTCV) Appropriation, one can balance program affordability by varying the quantity of vehicles to be produced based on the expense of the mission module (turret or fighting compartment). The Army has a major choice yet to be decided. We can either move all of our heavy armored vehicle work into our remaining government owned tank production facility and vary the mission equipment produced in commercial facilities, or move the common heavy chassis to a commercial facility where the company which wins the competitive contract can integrate the chassis and mission equipment and deliver it to the Army. Under either choice there is a major change ahead for the country in the way which we develop and procure armored vehicles in order to modernize our heavy forces.

Before discussing the medium chassis, upon which the Line-of-Sight Antitank or LOSAT will be based, there is clarification needed on our plans to modernize chemical energy missiles beyond TOW and Hellfire. First let me begin by describing the linkage between AAWS-Medium and AAWS-Heavy both of which are in research and development with the medium furthest along (entering full scale engineering development). The winning technology from the AAWS-M development can be grown into a longer range heavy version of the medium antiarmor weapon system. The reason we have pursued medium before heavy is that DRAGON is in immediate need of replacement and there is significant growth left in TOW (TOW 2A and TOW 2B). When the FIFV is designed, the Army will have the option of employing AAWS-M from FIFV or developing a missile which has taken the name the Advanced Missile System-Heavy or AMS-H. The name AAWS-H was previously taken and had three components: (1) the Kinetic Energy Missile (KEM) which is also known by a contractor name Hypervelocity Missile (HVM), (2) the Fiber Optic Guided Missile or FOG-M which is a non-line of sight air defense missile applied in an antiarmor role, and (3) the replacement for TOW 2 or AMS-H.

It is easier to clarify how these all fit by sticking with the flow of weapons systems over time. The KEM on a Bradley chassis is the Line of Sight Antitank or LOSAT dedicated antitank weapon. It will replace the Improved TOW vehicle which is a M113 carrier with a TOW pod that preceded the Bradley and is still in the dedicated antitank companies of the heavy force. The flow then is TOW 2 A & B on Bradley followed by LOSAT with KEM to replace ITV, followed by FIFV with AMS-H or a version of AAWS-M to eventually replace Bradley in the forward deployed units. The FOG-M in an antiarmor role is covered by tasking the Program Executive Officer for Air Defense to evaluate FOG-M in an antiarmor role. This non-line-of-sight air defense system when ordered could join the antiarmor battle when the commander decided this is doable given the lack of enemy air. In summary,

NOW	FUTURE
M901 ITV	LOSAT w/KEM
Bradley w/TOW	FIFV w/AMS-H or AAWS-M

One of the enduring strengths the United States enjoys over potential adversaries is the existence of a broad, high quality, innovative private industrial sector. Were we to rely only on government R&D centers, capable as they are, we would deny ourselves this tremendous advantage. Therefore, industry will be involved as a partner with government through open competition at each stage of the Heavy Force Modernization program. While we will not ignore approaches based on conventional wisdom, innovative solutions will be encouraged for the next generation of vehicles. Contracts will be performance oriented in order to challenge industry to provide the best, most cost effective solutions to Army requirements. It is through the competitive process that we hope to achieve innovative answers to Army requirements which might otherwise not come about.

And finally, we will be proactive. Were we to adopt the philosophy of waiting for the optimum solution, we would make no progress at all, indeed we would fall further behind. The Soviets pursue a steady, redundant, evolutionary modernization program which improves fielded systems and produces new systems on a regular basis. In order to keep up with the threat, much less to turn inside it, we must have a dynamic modernization program of our own that continuously improves our war-fighting capabilities.

We can accomplish this goal with the Armor AntiArmor, Aviation, Heavy Force, Fire Support and Tech Base modernization plans. With your help and support, we will provide our Army with what is needed for it to continue to serve as a viable deterrent and to be ready should it be called upon to protect our Nation's vital interests.

Last year my request of you was for increased funding to help meet our shortfall in the A3 requirement. I am thankful to the Committee, and in fact the entire Congress for the support which followed. This year our budget request contains the funds which we consider essential to redressing our insufficiencies and executing the plans I have just described. I ask your support in sustaining this level of funding.

Gentlemen, we are ready for your questions.

Senator LEVIN. Thank you, General Pihl.

Welcome, and please proceed, General Shoffner.

STATEMENT OF MAJ. GEN. W.A. SHOFFNER, ASSISTANT DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS (FORCE DEVELOPMENT AND INTEGRATION), U.S. ARMY

General SHOFFNER. Sir, I would like to briefly talk to the challenges presented by the Soviets which have an impact on force modernization of both the United States and the Soviet Union.

Looking at the Soviet military today, major things appear to be changing: defensive doctrine, reasonable sufficiency, unilateral reductions and restructing, announced cuts in military spending and procurement, and a professed willingness for deep asymmetric cuts to achieve parity in the region of the Atlantic to the Urals.

The specific military implications of these are, in many cases, not clear and are probably still being formulated. But what is clear is that, number one, these changes are being made in response to Soviet, not NATO, needs, principally the need to divert resources from the military to bolster a moribund civilian economy.

Second, real changes are occurring with real military impact. For example, major Soviet unilateral reductions will affect the threat of a standing start attack. Warning time will be affected. Even with these changes NATO will continue to face a military challenge, albeit perhaps a different one from that with which we have been familiar.

So, the question is, what is the nature of that challenge? Military perestroika, or restructuring, may lead to near-term as well as long-term enhancements in Soviet military capability.

With the significant improvements to command and control which they have done, and a unifying concept for high-speed conventional operations already established, then their changes to a better balanced combined arms division are more likely to be effective either defensively or offensively than one optimized for only offensive operations. A smaller balanced organization, coupled with command and control improvements, will enhance their force agility and their ability to rapidly concentrate combat power. A renewed emphasis on training can help them bring to bear the full potential of their combat capability, and a smaller standing force can mitigate some of their ethnic and demographic dilemmas they presently face in manning their force.

Their bold proposal for reductions to parity is no guarantee of peace. History abounds with clear examples of successful attacks by forces at parity or less. The Japanese attacks on the Malayan peninsula against the British in 1941 and 1942 where the Japanese were outnumbered 8 to 5 were successful. The German attack on France in 1940 and 1941 with the German force at less then parity was also a successful campaign.

In cases like these where a smaller force is successful in an offensive campaign, several key ingredients are required. Leadership must be competent in the application of operational art and must gain the initiative. The forces must be tactically and technically competent and capable of gaining a clear tactical advantage when the combatants engage, and the smaller force must have effective command and control and superior force agility. There must be a clear operational concept and objective. Victory will go to the side which is superior in these areas.

The challenge to NATO is to continue to improve its ability to fight at the operational level, to continue to improve its command and control, and to modernize its forces. Should deterrents fail and combatants join on the battlefield, we cannot risk the lethality and survivability of our forces. There must be no question of the outcome of those battles.

Modernization will remain a key part of the Soviet military challenge. A robust and effective Soviet research development and production infrastructure has been successful in eliminating the qualitative advantage we have previously enjoyed. An infrastructure, which has been successful in a vital area, will likely stay around under perestroika. I do not expect to see on the scrap heap the reason for the success of their 5-year plan in this area.

Further, increased spending in R&D reflects a longstanding concern by the Soviets about lagging in high-technology areas. I would expect the increased Soviet spending in R&D announced by their Minister of Finance to leverage the previous large investments in military design bureaus and production facilities.

Further, a smaller force will have lower operating and support costs and an overall reduced requirement for procurement. It will, therefore, be less costly to modernize. The net result, in my view, is not only the prospect for long-term technological competitiveness, but also the near-term prospect for modernization at its present or greater rate. In July 1988 General Yasov, the Defense Minister, cited rapid implementation of scientific conclusions as the priority task in military sciences. This comment captures the thrust of the modernization of the Soviet forces.

So, in the long-term, perestroika is not inconsistent with improved combat readiness of the Soviet Army. There is considerable rhetoric regarding defensive doctrine, but the Soviets have neither changed nor renounced the primacy of the offense, nor is there any manifestation of concrete change in force structure, force disposition, or weapons production that supports such a drastic shift.

As a matter of fact, tank production for the first quarter of this year is at a higher rate than at any time since World War II. In commenting on the unilateral withdrawal of Soviet forces, General Sketkov, Commander of the Soviet group of forces in Germany, said he wanted to emphasize—and I quote—"the withdrawal of Soviet troops from the German Democratic Republic, reduced by not a jot the level of security of the U.S.S.R. and our ally, GDR"—end quote. Sketkov went on to comment that some of the tanks would be mothballed east of the Urals.

The most recent version of the Soviet Capstone Doctrinal Statement, Tactika 87—which corresponds to our FM100-5—which describes how they intend to fight, is consistent with the forms of combat reflected by their structure and the statements of their field commander. While Tactika 87 places increased emphasis on force agility, fire support, and command and control, the offense is recognized as the only decisive form of combat. Their doctrine and structure have not shifted the need for armor/anti-armor forces.

Thus, at the strategic level, while the new initiatives may reduce the burden of maintaining forces with overwhelming quantitative superiority, a burden long borne by the Soviets, the qualitative modernization challenge for armor and anti-armor forces continues and will remain. It may in fact become more severe.

We must not place at risk the lethality and survivability of our forces facing the Soviet threat or a surrogate threat equipped by them. The challenge facing the United States in the armor/anti-armor arena is to field systems which will require the Soviets to continue to protect against multiple kill mechanisms. That is, chemical energy and kinetic energy ammunition with the capability to defeat tanks frontally through the top and from the bottom.

When we close with the enemy on the battlefield, we train to present him with multiple ways to die. That is the combined arms approach; never give the sucker an even break. We need to field weapons which make improvement to survivability and kill rate through improved fire control, faster missiles, and multiple launch capabilities from a single platform. We need to kill him at a rate more rapidly than he can replenish and live to come home and tell about it. We need to field weapons which are not susceptible to countermeasures and weapons which gain a significant overmatch in lethality and survivability that assure a margin of sufficiency in this dynamic critical arena. Our 1990 budget has been carefully crafted to support these needs within the resources available.

Thank you, sir.

Senator LEVIN. Thank you, General Shoffner.

General Franklin, please proceed.

STATEMENT OF MAJ. GEN. R.M. FRANKLIN, DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT, AND STUDIES, U.S. MARINE CORPS

General FRANKLIN. Mr. Chairman, I would like to enter my statement into the record and just make a very short verbal comment.

Senator LEVIN. It will be made part of the record.

General FRANKLIN. As you know, the Marine Corps is a combined arms air ground task force built around three infantry divisions. We are vitally interested in infantry anti-armor weapons. We applaud the Army's selection of AAWS-M. We think it is the right technology at the right time and we are fully supportive and want to get into that program and procure with the Army when they start their low-rate initial production.

We work with the Army and with DARPA on smaller lighter man-portable infantry weapons. We feel that it is not one man with one missile against one tank. It is one infantry battalion against one tank battalion.

We begin attriting that tank battalion with organic Marine aircraft as far as we can reach them and begin taking out their bridges, their fuel, their ammunition dumps. Then we start using long-range artillery, TOWs, and mortars. When they finally get in with the infantry, what is left of that tank battalion is going to lose. There will be a lot of Silver Star medals and quite a few

Purple Hearts. But the infantry battalion will win that engagement.

We are interested in light armor and improvements to light armor, especially in the manufacturability and affordability of light composite armors. We are a force that comes from the sea. We are sea-based. We must get ashore with light armor that is survivable. We think that the joint armor/anti-armor program that the Army and DARPA and the Marine Corps have signed on to and have supported is producing some good results in that area.

We look forward to your questions. Thank you very much, sir.

[The prepared statement of Major General Franklin follows:]

PREPARED STATEMENT OF MAJOR GENERAL RAY "M" FRANKLIN
COMMANDING GENERAL
MARINE CORPS RESEARCH, DEVELOPMENT, AND ACQUISITION COMMAND

Mr. Chairman, distinguished members of the Committee, it is indeed a pleasure to appear before you today and present the Marine Corps' position on armor/anti-armor.

The Marine Corps views the armor/anti-armor arena as a vital one. There is no doubt that the armor threat we face today and the potential future evolution of that threat pose a formidable challenge for all of us. We fully supported and participated in the Defense Science Board study in 1985 on the subject. One expression of our concern is our continued interest in Defense Advanced Research Projects Agency's (DARPA's) work on improving the survivability of light armor and their efforts in increasing the lethality of chemical energy warheads.

The objectives of the DARPA/U.S. Army/U.S. Marine Corps Joint Program Office (JPO) include the closure of technology gaps between Soviet and U.S. armor/anti-armor technologies, the establishment of competitive modernization rates, the creation of a strong U.S. industrial capability, and the transition of high-payoff results into block changes and new programs.

As an active participant, the Marine Corps is addressing its requirements through the Joint Program Office. The major objective of this program is to develop minimum weight armors capable of defeating current and future threats. Promising light armor designs are currently undergoing evaluation.

The CE warheads being developed by the JPO offer enhanced performance for systems such as TOW, HELLFIRE, and SMAW. The close ties between the Army, Marine Corps, and DARPA will assist in moving these developmental warheads into fielded systems on a timely basis to support identified needs and planned production schedules. In addition, we are paying close attention to the Short Range Antitank Weapon (SRAW) being pursued by DARPA under the Balanced Technology Initiative program as a potential capability for Marines as a manportable, shoulder fired, proliferable, inexpensive system with the ability to defeat a main battle tank. The SRAW program will transition to the Marine Corps prior to full-scale development.

Our aviation anti-armor inventory currently consists of the TOW and HELLFIRE Missiles fired by the AH-1 Cobra, and the Laser Maverick fired by our fixed wing assets. Future improvements will also make the HELLFIRE capable of being launched from fixed wing aircraft, giving the Marine Corps a larger anti-armor aviation platform base. The eventual goal for the late 90's is to neckdown TOW and HELLFIRE into one weapon that will combine the best features of both with an anti-air capability and give us an extremely capable weapon with a much reduced logistics trail.

The Marine Corps' primary thrust today is to provide our infantry Marines with portable anti-armor weapons, effective against current and projected threats. For that reason, we fully support the Advanced Antitank Weapon System-Medium (AAWS-M) with its fire-and-forget technology, and are eager to get them into the hands of Marines.

The TOW, as a heavy system, is an effective weapon with growth potential. However, we are optimistic that AAWS-M technology will also evolve into a heavy fire-and-forget system (AAWS-H) which will eventually replace the TOW.

We've done other things to improve The Marine's ability to kill armor targets, building on the limitations of past available technology. for example, we replaced the LAAW with the AT-4 proliferable light anti-armor weapon; we upgraded the SMAW with an anti-armor warhead; and we improved the lethality of the DRAGON warhead.

The Marine Corps is developing a Rifle-Launched Anti-Armor Munition (RAAM). Also, the Marine Corps expects to begin a Foreign Weapons Evaluation of an 81mm guided mortar round.

Despite the oversimplifications of critics, we recognize that a total armor/anti-armor solution may never be found in one system. Killing tanks cannot be viewed as a one-versus-one situation, i.e., one Marine with a missile versus one tank. Battles are fought with combined arms units using all the weapons at their disposal, such as infantry, air, artillery, tanks, mortars, naval guns, and missiles.

These thoughts must be at the center of our discussions and decisions when we look at the potential weapon systems of the future.

BLOCK II PROGRAM

Senator LEVIN. Thank you, General.

General Pihl, first I would like to ask you about the Block II version of the M–1 tank. You made reference to it in your testimony. How important is that Block II program?

General PIHL. Sir, the Block II program is vital to the Army to get ahead of the arrival of the Future Soviet Tank II in large numbers. We have adopted a strategy where we intend to field our forward-deployed forces a modern set of tanks every 5 years. If we start the Block II program in 1992, we will be able to have enough Block II tanks in our forward-deployed divisions ahead of the time that the Future Soviet Tank II arrives in serious numbers in the group of Soviet Forces Germany. The Block II tank gives us, for a 20-percent increase in cost to the tank, a 54-percent increase in fighting capability when we are on the offense and a 100-percent increase in combat capability when we are on the defense.

Senator LEVIN. What was the increase in the cost again?

General PIHL. Twenty percent, sir, to the cost of the tank.

Senator LEVIN. Now, as I understand it, the Department of Defense directed the Army to keep the cost of the A–2 upgrade under a certain cap. Is that correct?

General PIHL. Yes, sir, that is correct. The Defense Acquisition Board on December 2 of last year—Dr. Costello, the Defense Acquisition Executive—imposed a $300,000 per item cap on the Block II program.

Senator LEVIN. Can you tell us how that cost cap limits the Block II program?

General PIHL. Yes, sir, I can. We presented a Block II program to Defense that was essentially—apples to apples, sir—a $570,000 increase to the tank. That was considered to be too expensive given the integration costs for the various items that are in the Block II tank. At the present time, we can bring that cost down since we have been out in the marketplace now for about 6 months to $476,000 per tank, as compared to the $300,000 per item cap.

One of the notions was that we would take all of the capability, the Commander's Independent Thermal Viewer, the improved weapons station, position navigation device, a CO_2 laser range finder, the armor package, and then the data bus which we call the core—c–o–r–e—core tank, and hard-wire each of those boxes inside the turret for a cost that is less expensive than a fully integrated tank like the cockpit of a fighter plane. We have run an analysis of the single-box integration in the tank and find that that would cost around $700,000 to put every single black box individually into the turret of the tank.

The most effective way to integrate the tank is to use the architecture provided by the computer inside the turret to do the displays, do the fire control solutions, and to do the computations necessary to fire faster. What we are trying to do is put double the number of rounds on target through the Block II by giving the tank commander the ability to hunt for targets and the gunner the ability to kill targets. So, we want to double the rate at which we kill enemy tanks. Right now, sir, in a comparison dollar-to-dollar, we think it will cost per item $476,000 to bring in the Block II tank. In essence, what I am telling you is we need relief from the $300,000 cost cap.

Senator LEVIN. If that cap is retained, what will you have to eliminate?

General PIHL. Sir, we will have to eliminate the Commander's Independent Thermal Viewer which eliminates the hunter-killer aspect of the tank commander fighting independently from the gunner.

Senator LEVIN. Is that it?

General PIHL. Yes, sir. That would be that item that would match that cost.

Senator LEVIN. How does that affect the 54 percent on offense and 100 percent on defense?

General PIHL. It would affect that severely, sir. The Commander's Independent Thermal Viewer—to be able to fight in dust and obscurants from the commander's station—while he is out looking for other targets, the gunner is shooting at the targets he has already found. So, if you take out the CITV, you will not be able to look through battlefield clutter—or, crud, as we call it—to find those targets. It would affect that 54 percent significantly.

Senator LEVIN. You have identified all of the advances in Soviet armor. Can we afford to delay the production of the A2 given those advances?

General PIHL. We cannot, sir. The A2, if we are to get ahead of the arrival of the future Soviet Tank II, is mandatory.

HEAVY FORCES MODERNIZATION PROGRAM

Senator LEVIN. In the Heavy Forces Modernization Program which you described, last year you testified that your tank modernization program was going to focus on the upgrades to the M1. This year you have proposed this so-called Heavy Forces Modernization Program which essentially would build a new tank. Why did you change your direction on that?

General PIHL. Sir, we really thank this committee for your insight in giving us the $30 million in the 1989 budget that allowed us to do the block mod upgrades for Block III. That is a larger caliber gun, a new suspension system, a new power pack, and the ability to integrate all of that into what we call a Block III Tank.

In essence what the Army has done is to take your initiative and continue it in 1990 with a Heavy Force Mod initiative of $186 million in our budget request to take a look at two options. One, the Block III on an M1, which you directed, and/or a competitively designed tank that would come in perhaps in the 1997–98 timeframe that would be a different design than an upgrade to just the M1. Now, that is the common chassis that is being proposed in the Heavy Force Mod plan which would be the base vehicle for the new infantry, artillery, and engineer vehicles in what we call package 1 of Heavy Force Mod.

We have kept our options open. The decision on whether it will be a new tank or a block upgrade, which you have directed that we do, is due in the second quarter of fiscal year 1991. What we are doing now is taking the best of the government laboratories and the best of industry and blending them together so we can put out a Required Operational Capability statement, a ROC, as we call it, for our new tank.

Senator LEVIN. My time is up, however, I will come back to that. Senator Wilson.

SOVIET MODERNIZATION PROGRAM

Senator WILSON. Thank you, Mr. Chairman. General Shoffner, in your threat assessment I think you very eloquently made a point that even given the professed Soviet willingness to engage in deep asymmetrical cuts, even were that to lead to reductions that would produce parity, that parity is itself no guarantee of safety. Is it your expectation that the Soviets are going to reduce their rate of modernization?

General SHOFFNER. I do not think so. There are two or three signs, I think, that would tell us that things will stay at the current rate and the quality may improve.

Those design bureaus which are responsible for the modernization programs, as you know, are much more numerous than ours. Those are employed; the production facilities associated with those are fully employed. And, the increased funding at 20 percent which the Finance Minister announced which, as I understand it, will be administered by the Soviet Academy of Sciences, is sort of broadening the base of the R&D and I think giving them an opportunity for more research that is not necessarily directed.

The potential for significant improvement, in my view, is greater given the latitude they have applied to the Soviet Academy of Sciences as opposed to leaving it directed specifically to military R&D. So, unless we see large changes in the design bureaus, large changes in the production facilities with the tailoring of their forces and thinning out, I would expect to see them continue at the current rate if not accelerate somewhat. The options for acceleration are there, sir, in my view.

Senator **Wilson**. With that evidence in mind and with the Soviets spending the bulk of their effort in land-power——

General **Shoffner**. Yes, sir.

Senator **Wilson** [continuing]. Given the budget constraints we are facing with the Army in third place in the DOD budget, tell me how do we remain competitive with what you see as this increasing rate of modernization? In my statement I said we cannot match them tank-for-tank but we ought to keep a qualitative edge. What you are saying is that looking at their design efforts, their R&D efforts, you think that they are very determined to gain that edge on us?

General **Shoffner**. Yes, sir. You know, I believe they still perceive themselves to be deficient in the application of science and technology. That was one of the things which supported that increased R&D piece.

But we have made two important decisions in the past year in aiming towards that future. Those are reflected in the Heavy Force Mod plan which General Pihl talked to. But the two central decisions, sir, are, number one, focus on keeping the forward edge of our forces competent on the battlefield.

You can basically take our Army and divide it into thirds. About a third of it is forward deployed or rapidly deployable; about a third of it will get in the fight within the first month; and about a third of it in the months to follow.

If you look at those as three-force packages, recognizing that not all of the threat is of the same quality, we then are tailoring the modernization of those force packages so that they will have an overmatch capability with the forces which they meet.

Instead of trying to field the entire Army in one configuration of a tank and taking 15 years to do that, we have embarked on a development and acquisition strategy which will take the first force package, Force Package I, field it with a competent capability in 5 to 6 years, and then be prepared to introduce a significant improvement in lethality, survivability, and fightability and modernize Force Package I while we pass Force Package I capability down to Force Package II. That flowdown across will then guide us.

Our priorities are first to fight, do not put at risk lethality and survivability, and plan on modernization because it will be a continuous process.

The other piece of that, to go with the Heavy Force Mod plan, is the structuring of the tech base so that we have in train at all times an in-depth R&D effort to continue in 6.1, 6.2 and 6.3, 6.3A and B those programs necessary to support a continuous modernization. As we have taken budget reductions—I guess the one place where we have agreed in the investment accounts not to take further reductions, is in the R&D side.

Those two pieces, I think, sir, will help us deal with fielding a modernized capability superior to that which the enemy has, but fielding it at a rate greater than his. If we are able to do that, then I believe we will eventually close the gap which we are otherwise suffering from.

REACTIVE ARMOR

Senator Wilson. Moving to the anti-tank side of it, a year ago you stated that the fielding by the Soviets of reactive armor rendered our current anti-tank systems almost obsolete. You have had a year now to further evaluate the reactive armor challenge. What is your current assessment and what is the response?

General Shoffner. Well, since we made that statement, the Soviets continued to field reactive armor on modern as well as older tanks. So fielding of reactive armor has continued.

We have done a major exploitation of what we believe to be that capability. We have fielded TOW-2A which has a capability against that, and I think we know what is required to deal with the defeat of that and we have set in train programs to do that. We could discuss that in greater detail in closed session.

General Pihl. It is still a very serious concern, sir, and we remain concerned about the reality of reactive armor. We are also fielding the new 120 millimeter tank cannon round which will defeat that threat.

Senator Wilson. My time is up, thank you.

Senator Levin. Thank you, Senator Wilson.

Senator Shelby.

FOG-M

Senator Shelby. Thank you, Mr. Chairman. General Pihl, I mentioned earlier I was getting into the FOG-M. I know what you are doing, what we are planning to do with FOG-M as an anti-helicopter weapon.

What I am concerned with, and I think other people on the committee are concerned, is the lack of progress or lack of initiative—or interest perhaps—that has been shown in the FOG-M as an anti-armor/anti-tank weapon. I think that is what it was originally designed for. I know it has multi-capability there.

Why is the Army dragging its feet as far as an anti-armor capability there? I am familiar with the Boeing-Hughes team moving forward on the FOG-M as the anti-helicopter weapon, but I am really concerned and I believe this committee is going to be concerned, and other people in the House have voiced this—what has happened on the anti-armor?

General Pihl. We used to have three parts to the anti-armor weapons system-heavy (AAWS-H). The kinetic energy missile (KEM) or kinetic energy round.

Senator Shelby. Right.

General Pihl. A replacement for the TOW, or what we now call an AAWS-H, and the FOG-M were all candidates to replace the improved TOW vehicle which is our dedicated anti-tank system. There is one company of those weapons in each of our mechanized infantry battalions.

We made a judgment a year ago—the Chief of Staff did—in August 1988 that we would take the Fiber Optics Guided Munition and put that into the air defense as a part of our Forward Area Air Defense program. That is one of the five components of what we call FAADS.

The purpose for that is to have the anti-helicopter capability to shoot a hovering Hind, Havoc, or Hokum behind the hill because that indeed is an anti-armor system for their side which is an air defense threat to us.

Now, I have charged my program manager, Colonel Oleh Koropey, down at Huntsville, with developing the anti-armor capability of the FOG–M as he is evaluating the anti-helicopter capability. So, I have that under a program executive officer.

Senator SHELBY. But that is not part of the Boeing-Hughes mandate, is it?

General PIHL. Yes, sir, it is.

Senator SHELBY. It is? That is part of it?

General PIHL. It is that same accelerated system that the Senate Appropriations Committee said, do not do Dr. McCorkle's laboratory system, but go to a fully optimized system that comes from industry.

So, my program manager has a two-part task—anti-helicopter and anti-tank. Now, General Shoffner, I am sure, will add to my answer. The thing we have not done is to explicitly put in a program line called anti-tank FOG–M because the program manager is doing both jobs within one line.

Senator SHELBY. When is this going to come about?

General PIHL. Well, that is a decision we have to take, sir, as we go downrange.

Senator SHELBY. What does that mean, though?

General PIHL. Sir, we have to decide whether or not we want to reserve specific forces, like the improved TOW vehicle, to fire FOG–Ms in a ground role against anti-armor. We have not made that decision.

The decision we did make was to pursue the Kinetic Energy Missile, our true overmatch capability in lieu of the TOW on M113 carrier, which we call the ITV. In essence, we made a selection between the two technologies for the ground role.

So, one of the things you could do in a multi-mode option is to have your air defense commander come up and join the battle and fire FOG–Ms at tanks. But that is just like putting Vulcans, our current direct fire air defense system, into an anti-infantry or anti-armor role.

Senator SHELBY. But haven't some of the FOG–M demonstrations or simulations as anti-armor come out real well?

General PIHL. They have, yes, sir.

Senator SHELBY. I have seen some. That is right.

General PIHL. They have. Surely they have. It is a promising technology but it is not as large an overmatch as the Kinetic Energy Missile is.

Senator SHELBY. Well, is the Army interested in getting ahead or just staying even? I think that is important.

You know, in this committee—and I know the chairman has shown leadership in this area of getting ahead technologically as far as conventional weapons. It seems to me that you are dragging your feet on the anti-armor capability of FOG–M. That is the thrust of my comment.

General PIHL. Sir, I understand your comment. I think we are moving to get ahead. I have the FOG–M working under my Air Defense Program manager. I have the Kinetic Energy Missile working under General Schoemaker who is my Anti-Tank Program manager, and I have options that are open. So, I think I am getting ahead.

Senator SHELBY. Let me assume—I want to get to General Shoffner too, if my time will allow—I will have to wait for a second round like the chairman and all of us. But, looking at the political scene in Germany today about short-range modernization and nuclear weapons, if those weapons are not modernized—I hope they are, but I would not bet on it, looking at the politics of Germany and so forth—if they go, which I would assume they are going to go sooner or later, maybe sooner than we think, why not accelerate the development of the FOG–M as your latest anti-armor?

You know, you have thousands of tanks and I know the short-range nuclear weapons could be used and would probably be used as an anti-armor situation there today. But, let us look down the road tomorrow. Is this what is holding some of that back, the reluctance on the part of the administration to come up with a technological conventional weapon to stop tanks where they would not have to rely on the short-range nuclear weapons?

General PIHL. Sir, we chose the Kinetic Energy Missile because of its overmatch capability. It is the real capability of the future for a line of sight anti-tank weapon. It is the line of sight anti-tank weapon in our first package of the Heavy Force Mod plan. In a sense conceptually we made a choice between FOG–M and KEM. I understand your question, sir, and we will take another look at FOG–M in the ground role.

Senator SHELBY. General Shoffner, you say many things which are right on target. For example, if the Soviet wants to act as though he has uninvented nuclear weapons but we can present him and he will embark upon a course of action and invest significantly in that, but yet we can find ways to kill him at rates equivalent to battlefield nuclear weapons, what a wonderful deal we have for him.

So the focus on expanding the battle space and increasing the kill rate is exactly on target. I believe that is a key investment for us as we enter the third millennium. You know, within 15 years we should be capable of doing that.

But we will not fill it if we keep dragging our feet on a technological breakthrough that I see that the Army has not taken advantage of in the anti-armor. But you are moving in the anti-helicopter.

General SHOFFNER. Let me tell you what we have done which I believe at this point in time is a question of how much change one can assimilate. To employ the FOG–M in an anti-tank role through expanded battle space requires several doctrinal and conceptual questions to be answered.

Senator SHELBY. We know that.

General SHOFFNER. All right, sir. I do not know what the answers to those are today. Should it be employed by the task force commander or the brigade commander or the division commander? A fair question.

To answer that, tell me what the range shall be. I am not sure of what the range is just yet. There are some technical issues which we are working. If you can do 10 kilometers, we would employ it one way; 20 kilometers, yet another.

Without knowing the answer to that, you have a couple of different modes in which you would do that. If you choose to put an additional weapon into the task force, the task force commander currently has several weapons—50, 60, 70 weapons—to employ and he is strapped for time to get them into the fight effectively. So, you would choose to move it elsewhere. That is a key decision.

So, here is what we have done. Apparently it is not fast enough for you. But, we took the action——

Senator SHELBY. Well, I hope that it is going to be fast enough for the Army and the Marines.

General SHOFFNER. Well, I think it——

Senator LEVIN. Excuse me. The Senator's time is up.

Senator McCain.

APACHE AND LHX

Senator McCAIN. Thank you, Mr. Chairman. I thank the witnesses for being here and I appreciate their testimony.

I am concerned about the impact on the Army's decision to close the Apache production line. Last year, General Pihl, you testified to the Senate Appropriations Committee that the Army desired a combined arms approach to halt the deterioration armor/antiarmor balance. That clearly placed the Apache in that equation.

This morning, General Pihl, General Vuono testified that the LHX was not a follow-on or replacement for the Apache helicopter. Is that your view?

General PIHL. That is correct, sir.

Senator McCAIN. We no longer need helicopters with the capability of the Apache helicopter?

General PIHL. Sir, we do need the Apache capability and are buying them in 1990 and 1991.

Senator McCAIN. Then that will mean we will have enough? Is that right?

General PIHL. Sir, we will achieve 807 at that point in time.

Senator McCAIN. I am aware of the numbers.

General PIHL. Yes, sir.

Senator McCAIN. Does that mean we have enough?

General PIHL. Sir, we have made a decision in terms of affordability to take seven battalions of Apache out of our previous Aviation Modernization Plan.

Senator McCAIN. Well, either your first initial requests were in error or your present requests are in error. I wonder which one is the case?

General PIHL. Sir, our first requests were based on an Aviation Modernization Plan of $3.5 billion a year. When we reduced the budget by $10 billion in defense and we went through the balance that the Army had to strike, we changed our request for Apache by the amount that is presently before you.

Senator McCAIN. The tradeoff was made between the LHX funding and cutting the Apache. That is well-known. It was reported in the press. It was generally agreed to by General Vuono this morning in his testimony.

General PIHL. Yes, sir.

Senator McCAIN. Have you, General Shoffner, done any cost analysis as to how this will be of greater benefit to the Army by going ahead with the LHX and terminating the Apache helicopter? Have you done an analysis?

General SHOFFNER. Well, as you know, given the timeframe within which this decision was made, there was no analysis of the specific issue. But there has been analysis of what is required, sir, and let me answer it in that regard.

The challenge we have is balancing. Balancing between a sufficient number of armed scouts and attack birds. In work that we did last year to support the LHX decision, we showed to our satisfaction, and I think conclusively, that a mix of 18 attack birds and 13 unarmed scouts, plain vanilla scouts, was significantly less effective than 15 attack birds and 10 armed scouts, smart scouts.

We are convinced that there is a need for a competent armed scout aircraft in conjunction with the Apache. Our problem being, we were moving in a course of action where the Apache requirement was being met 100 percent and we had a significant deficiency on the armed scout side. It is that problem, sir, that caused us to do that. We have done analysis on the relative effectiveness of the mixes and we are reasonably confident in that judgment.

Senator McCAIN. I would appreciate it if you would provide for the record that analysis. I hope you would also do a financial analysis since this decision was obviously driven by budgetary reasons. I think everybody will agree that if the Army could have afforded it, it would have gone on with its original request. So, if you would provide us with a financial analysis as well as your tactical analysis. General Shoffner, what could be added to the U.S. and NATO inventories which would give a bigger increase in the corps antitank capability than the Apache?

General SHOFFNER. Yes, sir.

[The information follows:]

TANK KILLING CAPABILITIES

The Army does not have any formal effectiveness analysis today which specifically addresses the trade-off value of other systems vis-a-vis the AH-64 in terms of the resulting overall warfighting capability impact. However, the rationale and judgment used in developing the Army Aviation Modernization Plan was used as a basis to identify feasible trade-offs. The Army Aviation Modernization Plan provides a time-phased aircraft fleet that best meets, within resource constraints, the near-term employment plans of the warfighting commands and the critical operational capabilities needed for success on future battlefields.

A part of the diverted Apache funds were intended to provide support for the Armed AHIP (OH-58D) as an interim, near-term armed reconnaissance aircraft—our most critical deficiency. While the Army Aerial Scout Test demonstrated that the Apache, with its sophisticated target acquisition and night vision sights, was very effective in some scout roles, it was frequently detected and engaged by threat systems due to its size and detectability. With its cost and its low scouting survivability, it is not an affordable, operationally cost-effective scout. The AHIP program was not, however, supported at OSD, and thus was not included in the budget. The LHX is currently the only viable armed scout alternative.

The 1987 LHX Operational COEA clearly demonstrated that the LHX is the most cost-effective alternative to fix the Army's long-term (beyond 1996) need. With its multi-role capabilities, the LHX will be a very cost-effective aircraft for providing scout and attack capabilities for light forces.

No formal cost effectiveness financial analysis was accomplished on the proper mixes of attack versus scout helicopters for the near to mid term; the decision was predicated primarily on the fact that we would have 94 percent of our Apache fleet, but only 35 percent of our AHIP fleet. The following is an informal affordability analysis that shows how the Army can optimize the warfighting capability by balancing aircraft systems, support equipment (Other), and RDTE.

The Army Aviation mission area received approximately 15 percent of the total Army Research, Development, and Acquisition (RDA) account in fiscal year 1989 ($3 billion) and this grew in fiscal year 1990 to 16.1 percent ($3.2 billion) and in fiscal year 1991 to 16.7 percent ($3.4 billion). The Army Aviation Modernization Plan (AAMP) is based on $3.5 billion/yr and assumes a range of approximately $3 billion/yr to $3.5 billion/yr as a base before a new AAMP must be developed. Of the base, approximately $1 billion is needed for Aviation Survivability Equipment, Aviation Life Support Equipment, Fixed Wing Aircraft, Air Traffic Control and support/sustainability, which is referred to as Other in the AAMP. Approximately $.5 billion/yr is needed for research and development to develop Multi-Stage Improvement Programs for existing aircraft and the development of follow-on aircraft like LHX. The $3.2 billion (Total Aviation RDA) in fiscal year 1990 minus $1.5 billion (Other/R&D) leaves only $1.7 billion available for procurement of aircraft (modernization).

This $1.7 billion is used to satisfy Attack (AH-64), Lift (UH-60), SOA (MH-47E and MH-60K), Reconnaissance (OH-58D) and Cargo (CH-47D) requirements. Therefore, actual numbers of aircraft procured are determined based on warfighting enhancements, economic procurement rates, multiyear contracts and money available. Satisfying the directed SOA requirements ($.3 billion) required the Cargo (CH-47D) line ($.3 billion) and Lift (UH-60) line ($.4 billion) to continue (both of which are multiyear contracts). Thus, only $.7 billion remained to apply to the Attack (AH-64) line. The Reconnaissance (OH-58D) line became unfunded when OSD did not accept the Army's priorities or requirements.

In summary, aviation procurement is a function of Army total obligation authority for RDA with approximately 15 percent to 16 percent available for aviation. After paying the cost of doing business (Other and R&D), procurement funds are used to provide the most warfighting capability for the dollars available with the ultimate goal of a balanced force that best satisfies our AAMP.

General SHOFFNER. For the disposition of our forces that we have today, sir, and in the near term, we have a good capability on the ground by fighting at night.

Senator MCCAIN. Is there any other helicopter that fights at night?

General SHOFFNER. The other capability that we would put with the Apache at night to go with our ground forces is the armed AHIP to fight at night, and it is the air-cav capability that today is daylight and somewhat limited in its range. Adding that air-cav capability for night operations for the force as a whole is a significant improvement. That would be the addition.

Senator MCCAIN. General Pihl, when would you expect the LHX to become operational?

General PIHL. In 1997, sir.

Senator MCCAIN. There is no doubt in your mind?

General PIHL. Sir, I believe that with the current program and demonstration and validation and entering full-scale development next year, we can field a 7,500 pound empty weight Scout Attack helicopter in 1997.

Senator MCCAIN. Are you concerned about the impact on the capabilities of the Guard and the Reserve forces with this cutoff of production of the Apache?

General PIHL. Yes, sir. That was kind of a tough decision on where to make those cuts, as it always is. We are guided in making those decrements along the lines that I described on the Heavy Force Mod. So, we go into a reverse order sequence of who gets into the fight when and try to minimize the impact on the outcome of the fight. That is where we go to the time-phase force deployment list and I walk up that and assess those units that have had trouble maintaining readiness, that are having difficulty coverting, to minimize the risk and make smart business sense as well, sir.

TOW MISSILE

Senator McCain. On the subject of the TOW missile, given the dramatic reductions that are made in that acquisition, do you still feel that a second production source is not necessary?

General Pihl. Yes, sir, we do.

Senator McCain. Even though the production rate has been dramatically reduced?

General Pihl. Yes, sir. But we have only reduced it because of the need to cut in a modern TOW warhead, the TOW-2A, and eventually the TOP Attack TOW-2B, and would bring the system back to rate so that we would have enough quantity for both sources.

Senator McCain. Thank you. Mr. Chairman, I will have some additional questions for the record. I thank the witnesses.

Senator Levin. Thank you, Senator McCain.

Senator Dixon.

APACHE

Senator Dixon. Thank you, Mr. Chairman, I have a number of questions. I think I will ask that most be offered for the record and we will send them to you, General Pihl, if you do not mind.

Most have to do with the Apache, some with your decision on the AT-4. But, first of all, let me ask you this. Last year during the fiscal year 1989 appropriations process we provided an add-on of $50.4 million to ensure production of 72 Apache attack helicopters. Later the Army leaders stated that they did not need this money but could procure 72 AH-64s without the added funds. Is that still your position?

General Pihl. Sir, the present cost index upon which the Apache budget is based, as we have sent the 1990 budget over, is still not enough to build that scope of work. So, we would need the additional money.

Senator Dixon. Is that a reversal from last year's representations made to Congress, and if so, why?

General Pihl. Sir, I hope not. We got into a costing exercise between the defense analyst and the Army, and when the Apache program was forwarded in the budget, the money that was sent forward was not enough to buy the numbers shown in the number column. We really did not try to reverse anything. We got into a dialogue on what was the right index.

Senator Dixon. I wonder if you could clarify that for me in writing in such a way that this committee can understand it?

General Pihl. Yes, sir.

Senator Dixon. You know, we got you the money last year. Then you said you did not need the money. Now you cannot even build them. That is a little confusing to this Senator who has been an enthusiastic supporter of that bird. I have flown in it out in the State of my distinguished friend, the Senator from Arizona——

Senator McCain. It only crashed twice. [Laughter.]

Senator DIXON [continuing]. And I have seen it operate, and it is a great bird. Would you mind giving us something in writing on that?

General PIHL. I would be happy to do that, Senator.

AT–4

Senator DIXON. You are very kind, General.

Mr. Chairman, the rest of those questions on this, I will not belabor my friend the General on that, but if you would accommodate this Senator and the committee.

The other thing is this AT–4. Last year the Army made the decision to procure the AT–4 and they told us that their initial order was for 550,000 AT–4s but that they would eventually purchase over a million.

Now the Army has cancelled AT–4 production for fiscal year 1991 and is only buying 550,000. Does this mean the Army does not need a lightweight anti-tank individual weapons system?

General PIHL. Sir, the Army needs a lightweight individual weapons system. We looked at the lethality of AT–4s as a multipurpose weapon versus the other things we were trying to do in armor/anti-armor, such as TOW–2 A and B, improve Hellfire, and decided that we would forego a future buy on the AT–4, just on the lethality and affordability basis.

Senator DIXON. I have some written follow-up questions on the AT–4 and I would appreciate it if you would accommodate me by responding, General.

I thank the Chair for permitting me to ask these questions.

Senator LEVIN. Thank you, Senator Dixon.

Senator Thurmond.

ANTI-ARMOR WEAPONS

Senator THURMOND. Thank you, Mr. Chairman.

General Pihl, I want to welcome you and your expert panel here today. I found your prepared statement very informative, although I believe it is somewhat optimistic considering today's constrained budget environment.

Last week I read an article which indicated the American soldier has historically lacked a powerful anti-tank weapon. I hope the article was in error. I hope your efforts will assist in correcting if it is not. Do you have any comment on that?

General PIHL. Sir, we are moving forward with our anti-armor weapons systems medium. We have selected the team of Texas Instruments and Martin Marietta that is going to produce a true fire-and-forget weapon that works at 2,000 meters range. We are starting full-scale development of that program this summer and need to rush that into the inventory because of the current condition of our DRAGON weapons system.

The Marine Corps—and I will let General Franklin chime in—has joined with us in that development. It is a true joint development for a medium class missile system, 45 pounds in weight, individual soldier carried. Both services are locked-arms to get that system into our inventory.

APACHE AND THE ARMY NATIONAL GUARD

Senator **THURMOND**. The National Guard is very pleased with the Apache. What do you predict for the future concerning the National Guard and the Apache?

General **SHOFFNER**. The Guard Units affected are the 50th Armored Division and the 35th Infantry Division. We are in the process, Senator, of working a reduction in our aviation fleet size started last year, where we are pulling down one-fourth the size so that we can afford to modernize that. That affects the total Army, both Active and Reserve component.

We are in the process with the Guard right now of working out how to take those specific reductions with minimum impact on the forces concerned. As we work that, we will have to find solutions to what those units will be equipped with, if not Apache.

That was laid out in our Aviation Modernization Plan. We are in the process of working those changes. The decrement of the armed AHIP will deny me from relieving other aircraft to be passed down to other parts of the force. So, they will be concerned about that. We will be working with them, and when the final budget is marked, we will see then what assets we have to work with and I can answer more fully the impact of that cut, sir.

Senator **THURMOND**. I presume there would be no discrimination against the Guard and they will receive thorough consideration?

General **SHOFFNER**. Yes, sir.

Senator **THURMOND**. What is your answer?

General **SHOFFNER**. I am sorry, sir. Yes, sir, was the answer. Yes.

Senator **THURMOND**. Did you hear the question?

General **SHOFFNER**. You told me to make sure I paid attention to giving thorough consideration to the Guard, and I will tell you we work——

Senator **THURMOND**. I said I presumed there would be no discrimination against the Guard and they will receive thorough consideration. I just wanted to get your answer on the record.

General **SHOFFNER**. Yes, sir.

Senator **THURMOND**. Thank you.

General **SHOFFNER**. Thank you, sir.

AHIP

Senator **THURMOND**. General Pihl, AHIP was funded in the original fiscal year 1990 President's budget and killed in the amended budget. What is the impact on the Army of the loss of this aircraft which necessitates retaining obsolete OH-58As and AH-1s in frontline combat units?

General **PIHL**. Sir, the impact is significant. Stopping the program at 207 aircraft does not allow us to retire the Vietnam vintage AH-1 that you mention as well as the unarmed OH-58 As and Cs. We had a program to arm the AHIP and to bring it to at least 375 aircraft. We are now going to have to retain unarmed A and C OH-58's in our cavalry forces longer than we want to while we are waiting for the LHX.

PROTECTIVE ARMOR

Senator THURMOND. General Pihl, the Soviets allegedly have made significant advances in their protective armor. Do we have the capability to defeat the most advanced Soviet armor?

General PIHL. Yes, sir, we do.

ARMY NATIONAL GUARD

Senator THURMOND. General Shoffner, in your concept of modernized Force Package I at a 5 to 6 year pace, do you include the National Guard Roundout units as a part of the package?

General SHOFFNER. Sir, that is the M-plus-10 force and many of the separate Guard brigades—separate Guard brigades will be picked up in the next force package when they get into the force. The Force Package I is mainly the M-plus-10 force.

RIFLE LAUNCH GRENADES

Senator THURMOND. General Franklin, you indicated in your statement that the Marine Corps is developing a rifle launched anti-armor munition. Could you give the committee more details on this?

General FRANKLIN. We are doing actually two things right now. We are evaluating the foreign rifle grenades. They show some promise. Of course, they are just for light armor. They will not handle heavy armor.

We are pursuing a program which was called Heater, which is a rocket-assisted rifle-launch grenade. It is in the early stages of development down at Dahlgren. We will have more information on that as we check the lethality of the warhead and the accuracy. Right now it is a little early to comment. It has only been really worked on seriously for a year.

Senator THURMOND. How do you evaluate a capable anti-tank weapon?

General FRANKLIN. Really two things—accuracy and lethality. Rifle grenades are technically and historically not very accurate because they have very low velocities and the infantryman has a great deal of problem judging range beyond a hundred meters. So, rifle grenades are generally close-in weapons.

The Heater, until we get some more data on its dispersion and get some more warhead results, it is a little early to evaluate that weapon. The difficulty we have with Heater right now is that its usefulness is strictly limited to countering light armor and older model tanks because it does not have a precursor charge. You need a double charge in order to handle reactive armor.

I do not know of any lightweight rifle-launched weapon in the world that will handle reactive armor. I think the smallest you are going to get in order to handle major armor with the reactive applique on top of it is AAWS–M, a 40-pound system, single-man portable with a dedicated gunner.

Senator THURMOND. Thank you very much. My time is up, Mr. Chairman.

HEAVY FORCES MODERNIZATION PROGRAM

Senator LEVIN. Thank you, Senator Thurmond.

General Pihl, let us go back to the Heavy Forces Modernization issue where we left off. Some years ago there was a program which was called Armored Family of Vehicles which, as I recollect, was terminated because it was judged to be too expensive.

We are now going down the road of looking at some options on Heavy Forces Modernization. If I understood your last testimony correctly, you have not opted in effect yet for a common chassis in that Heavy Forces Modernization Program. You are looking at both a common chassis approach and an upgrade approach to the tank. Is that correct?

General PIHL. That is correct, sir.

Senator LEVIN. When will that decision be made?

General PIHL. Sir, on the calendar it will be March 1992. The second quarter of fiscal year 1992.

Senator LEVIN. I gather that a common chassis will cost you some performance on the next generation of tank. Is that a fair assumption? There would be some loss of performance to use a common chassis?

General PIHL. Sir, not necessarily.

Senator LEVIN. How much would you be willing to give up? How much performance would you be willing to give up in order to achieve a common chassis?

General PIHL. Sir, I would turn that equation around. As you have heard General Shoffner and I say today, I would not want to give up any lethality or survivability in the common chassis. So, the answer is none. I do not think there is any reason we would have to give anything up in building a common chassis.

ANTI-TANK INFANTRY WEAPON

Senator LEVIN. There have been a number of questions asked—Senator Shelby and others, I believe—about the anti-tank infantry missile. As I understand our situation, we have a Dragon missile, and the Dragon missile is not adequate to today's threat. Is that correct?

General PIHL. That is correct, sir.

Senator LEVIN. And you have testified that the Army is developing an AAWS–M new missile. Is that correct?

General PIHL. A new medium missile system. That is correct, sir.

Senator LEVIN. There is some effort to get the Army to buy an off-the-shelf system like the Milan II and the Bofors Bill. Is that correct?

General PIHL. That is correct, sir.

Senator LEVIN. That effort, I think, is being made by some in the House of Representatives.

General PIHL. It is. It is referred to as the Supplemental Interim Medium Anti-Tank System, or SIMATs.

Senator LEVIN. I will not even ask you the acronym again on that one. [Laughter.]

General PIHL. I think supplemental and interim, sir, tell a lot.

Senator LEVIN. Well, that is what I want to ask you about. How much would it cost to buy an interim system?

General PIHL. Sir, we believe to equip an expeditionary force like our 18th Airborne Corps, it would be $180 million to do that.

Senator LEVIN. Is an interim system necessary until the AAWS-M is ready for fielding?

General PIHL. Sir, we are taking a risk on building Dragon II and we know that. We need to get AAWS-M into the inventory just as fast as we can. But given the reality of the Dragon system to our heavy forces in that it is a tertiary weapons system in the back of a Bradley Fighting Vehicle, we think that risk in the heavy force is reasonable.

It is in the light forces where a consideration of an interim system comes up, and that is why we are product-improving the warhead on Dragon to give an 80 percent increase in the lethality of the missile system.

Senator LEVIN. I am looking for an answer. Are you recommending then against the acquisition of the interim system?

General PIHL. I am, sir.

Senator LEVIN. There is some risk in doing so, but that risk is more than justified by the speed with which we will be able to acquire AAWS-M.

General PIHL. Yes, sir. I believe that.

General LEVIN. General Franklin, you also testified, I believe, on this issue today. I want to get a very clear answer from you for the record too because I think there could be a difference potentially between us and the House. I do not want to prejudge what we are going to do, but in the event that happens, I think you ought to comment on it clearly, that is, whether or not the Marine Corps agrees with this. You previously had opted to buy or planned to buy for an improved version of a generation 3 version of the Dragon. You have apparently now cancelled that program. Do you have any interest in buying the Milan II or the Bofors Bill, which I gather are two European systems?

General FRANKLIN. We have looked at both of those systems and we have followed the Army test very closely. We have absolutely no intention of fielding either one of those.

There are some real serious problems. The Milan, first of all, is not a single man portable weapons system. We look at the number of missiles you can get downrange per trigger pull. With Dragon we have 24 dedicated Dragon gunners in an infantry battalion. One trigger-pull gets 24 missiles downrange. With Milan II, one trigger-pull gets 12 missiles downrange. It is very heavy. It is not significantly more lethal than the Dragon II warhead.

What they forget to tell you about in their peddling brochures is the logistics tail that comes along behind that baby and the fact that the warhead and the "safe and arm" is not qualified in this country, and that is one hell of an expense. We are absolutely not interested in an interim system.

Senator LEVIN. Is it fair to say that these were not systems which were cut out because of affordability?

General PIHL. That is fair to say, yes, sir. We do have an affordability issue there because we can product-improve 15,000 Dragons for about $23 million, as compared to the $180 to $200 million it would take to field 18th Airborne Corps. But the principal reason for looking at the weapons systems is that they are not really matched to the Dragon. They are more like the TOW. So, they are more medium to heavy missile systems that have been offered to us for evaluation. We have evaluated them and right now we think we can stick with Dragon II until we get AAWS-M.

Senator LEVIN. Thank you, my time is up. Senator Wilson.

Senator WILSON. Thank you, Mr. Chairman.

LIGHT ANTI-ARMOR WEAPON

General Franklin, let me pursue the line of questioning that Senator Thurmond was engaged in with you. I mentioned in my opening statement a Wall Street Journal article on May 2 by John Fialka titled, "Long Search for a Better Bazooka Frustrates Military." It indicated that we do not seem to ever have had a light individual shoulder anti-armor system that worked very well. The article further described a number of field expedients for attacking tanks, some of which I must say are colorful, to say the least. One involved a mixture of gasoline and Styrofoam peanuts, and one even more inventive that involved plastic explosives combined with chicken manure. [Laughter.]

Senator WILSON. I must say the American soldier and Marine are ever inventive. But then they might say that there is an excess of chicken manure in that entire mode of operation. [Laughter.]

But, in any case, let me just ask you——

Senator LEVIN. Your time is up, Senator. [Laughter.]

Senator WILSON. It would seem that we ought to be able to do better than that. I would really like to know what programs are ongoing, how much money we are spending on R&D, and just exactly how near we are in your judgment to developing the kind of a light anti-armor system that is reliable without quite so much imagination and inventiveness.

General FRANKLIN. Well, let me address a couple of things. First of all, the Marine Corps has bought out our inventory of AT-4s and we think the AT-4 is a good, proliferable light weapon. It has all the difficulties that you have with a very light infantry anti-armor weapon. Range limitation, accuracy limitation, and lethality limitation. However, as I mentioned before in my opening statement, when the final mix-up occurs and you have what is left of that tank battalion mixed in with infantry at close range, those light little weapons fired at the rear and the sides will, in fact, kill heavy-armored vehicles. So, we do not discount having those around.

We like AT-4 because, for instance, when you fire AT-4 at a tank, you do not fire one AT-4 at a tank, it is an infantry rifle squad—13 men each with an AT-4 and when the squad leader says, "Fire," there are going to be four or five hits on that tank at the same time. If you are real lucky, you might get two hits in the same applique armor panel and get a penetration. That is a very nasty little battle.

There are other possibilities. When I was in DARPA 16 years ago, we started a weapons system called a RAW, a Rifleman's Assault Weapon. It has been around for 16 years, still not developed. It may be a good technology but we did not pursue it very far.

There are other short-range weapons. For instance, the Marine Corps fielded the SMAW as a bunker-buster. We have built an anti-armor round for the SMAW. HEAA round. A very good anti-armor weapon. Once again, range is about 300 to 500 meters, and as you get to moving targets, the accuracy drops off. But we intend to use the SMAW as the company commander's anti-armor weapon. There are dedicated SMAW gunners in the weapons platoon of each company in the Marine battalion. So, that is his company commander's weapon. It is just another arrow in his quiver. When he is not busting bunkers, he can take on armor.

But most of your light infantry anti-armor weapons are for use against the APCs primarily. You really do not want to take on a main battle tank with light infantry weapons. You do that in extremis when you are all mixed up together.

HELLFIRE

Senator **WILSON**. Let me ask you—you may have already answered this with some of the comments that General Pihl made about what you have requested—what your view is of the utility of the Hellfire to fill the heavy anti-tank role in replacing the improved TOW. As I heard your request, you are requesting quite a number and I assume think well of it. It could be either one of you on that.

General **FRANKLIN**. The Hellfire for us, of course, is absolutely necessary for our W-Cobras. They will be armed with a mixture of Hellfires and TOW-2s. We think there is a lot of growth left in the TOW. We consider the Hellfire an overmatch right now. We would fire TOW first because it is cheaper. Then we will fire Hellfires. But the Hellfire is a superb air-to-ground missile and we will incorporate that in our H-1W aircraft.

General **PIHL**. We agree, sir, that there is significant growth left in the TOW missile system. We have assessed the ability to ground-launch the Hellfire. It was done in an evaluation in the Division I commanded out at Fort Lewis. We are evaluating it again in order to take a look at it as an option after the TOW, a follow-on to TOW. But, as I told Senator Shelby, at the present time we have looked at the kinetic energy missile as our main dedicated anti-armor overmatch system.

BRADLEY FIGHTING VEHICLE

Senator **WILSON**. You currently have the M2/A2 in production with provisions for a 5-year multi-year procurement in the fiscal year 1990 budget in order to sustain the effectiveness of the Bradley through the end of the century. What additional improvements are you considering and will there be an M2 Block III? Specifically, I have heard you mention the spall liner. Could you discuss that in that context?

General **PIHL**. Yes, sir. The results of our live-fire evaluation of Bradley led to the first three immediate changes. The spall liner which is made out of kevlar to protect behind armor effects, repositioning of the ammunition, and the high-hard steel applique we put on the outside to protect against the Soviet BMP 30 millimeter gun.

We also want to upgrade the engine on the Bradley because it increases with weight as you add that armor. So, we want to go up to 600 horsepower.

A Block III Bradley, as we are looking at it, could also include external fuel tanks. We could indeed add reactive armor to the Bradley system eventually to protect from hand-held heat.

So, everything we learn from the live-fire test we are applying to the Bradley Fighting Vehicle incrementally.

Senator WILSON. Could you go into a little more detail on the anti-spall?

General PIHL. Yes, sir. When a missile hits the Bradley, as we learned in our live-fire testing, there is a behind armor effect. The aluminum breaks up and starts to fly around the inside of the turret in small pieces. What we have done is to put a curtain inside the Bradley made out of kevlar material, just like a flack jacket, to protect the infantry on the inside.

Senator WILSON. How has this tested?

General PIHL. It affects it just like a catcher plate, sir, or a chest protector on a catcher. It stops it from coming in and flying around inside the turret because the curtain shields that spall from flying inside the fighting compartment.

Senator WILSON. It really works?

General PIHL. Yes, sir, it does. And we are also going to put it inside the 113, our older version of a troop carrier.

Senator WILSON. Thank you.

General FRANKLIN. If I might add just a little bit to that. We have tested the same thing with our amphibian tractor. What you normally get, as General Pihl says, when heat round hits, you get a peeling back and about 110 degree cone of damage, which could be as many as nine marines seated inside the vehicle. When you put the spall liner in there—and we have also added some external armor that we picked up in Israel to the outside—that cone of damage goes down to 30 degrees and you only lose three marines. That is a savings of six and we think that is significant. There is not much weight increase.

Senator WILSON. Thank you very much, Mr. Chairman.

Senator LEVIN. Senator Shelby.

FOG–M

Senator SHELBY. Thank you. The chairman runs a tight ship and that keeps us all in line, and we have to stick around, which is good for us. We all know this.

Getting back to my discussion on the FOG–M, some studies have been done through the Army—and I suppose through the Marines, or you have access, General Franklin to it—it is my information that some of the studies referred to in some of the manuals that you publish—the business plan—showed more than possible contributions by FOG–M as an anti-armor weapon. Showed that the non-line of sight on the FOG–M made the difference between winning handily and losing disastrously for the forces involved.

The real problem is that the FOG–M undercuts the need for virtually any other anti-armor system if the operational capabilities imputed to it are actually achievable. In other words, down the road, and I know we are not there yet, but if the FOG–M goes on line as an anti-armor weapon, it is developed considering the accuracy potential, is it possible it would not have a peer and the survivability would be so high since it is non-line of sight, General Shoffner?

General SHOFFNER. Sir, it was that kind of potential for that system that led us to continue some work to make revisions to our basic doctrine. That is a substantial shift for the Army.

Senator SHELBY. Sure. But you shift according to technology that comes through. Generals know that better than I do.

General SHOFFNER. Yes, sir. We made changes to the program I guess a year and a half ago based upon early evidence that there was significant potential and we did two things. We directed to put a change into the FAAD C^2I software to change the command and control capability for FOG–M so that it could join the supported force commander and from his vantage point engage either tanks or helicopters.

Senator SHELBY. Okay.

General SHOFFNER. That is a very important change.

Senator SHELBY. Sure.

General SHOFFNER. You did not see that as a big dollar shift. The second change that General Pihl directed to the PEO was to consider separate lines so you can get visibility for all the test and evaluation of FOG–M in the anti-tank role.

Now, from a development standpoint, those were the two changes that were necessary to exploit the potential. Now we go to work on the other side, which is a much more laborious and long effort, and that is to reset the doctrine and work out the concept.

We started a group at the War College last year to evaluate mounted warfare in 2004. We worked the concept, which is embedded in the basis for modernization of the heavy force, and we set up a general officer-directed special study group on air-land battle future for the heavy force. In both of those efforts we found that we must improve our ability to expand the battle space. The non-line of sight, the FOG–M system that you are referring to, is a key contributor in that means.

Senator SHELBY. It changes the whole equation. It could.

General SHOFFNER. It can. Yes, sir. It is a combination of expanding the space so that you have a relative advantage. There are several ways to do that. Extending the range is one. Denying him range is another. What you need is a relative advantage.

Senator SHELBY. But you can expand the range with a fiber optic, can't you?

General SHOFFNER. Well, you need to extend the range and then do something about it. What we would like to do about that is kill him at a very rapid rate. So, that is what we are working on. We have scheduled a concept exploration phase to try to put on the ground organizations designed with prototype kinds of equipment to work out the techniques and tactics of how to fight an organization. What you are asking for is almost a theological shift. If it is to last, it is going to take us a little while to do that. It is not foot-dragging.

Senator SHELBY. But it should not take forever.

General SHOFFNER. It will not take forever, sir.

General PIHL. That is true, sir.

Senator SHELBY. And it should not be—whether it is the Army, or any other group—that has ideas and resists technological breakthroughs or does not recognize the potential because they are satisfied with what is there. And this happens, does it not?

General PIHL. Yes, sir, it does.

Senator SHELBY. Okay.

General PIHL. But I want to be sure—not to be repetitive, sir—that you understand that my program manager is absolutely dedicated to evaluating FOG-M in the anti-tank role. He just happens to work in the air defense program presently.

Senator SHELBY. Well, I think they are both good.

General PIHL. Yes, sir.

Senator SHELBY. I think they both have tremendous potential. Would it be fair—to sum up again—that when you are looking at an anti-armor or anti-helicopter weapon, you are looking at accuracy and you are also looking at survivability?

General PIHL. Correct.

Senator SHELBY. Are those the two most important?

General PIHL. That is correct, sir.

General SHOFFNER. Lethality.

Senator SHELBY. Wouldn't the potential of the non-line of sight FOG-M have both? You know, if it works the kinks out.

General SHOFFNER. If we can assimilate that into the fight effectively, it will make a significant contribution to lethality and survivability of the force.

Senator SHELBY. And it would be a breakthrough that you have not seen ever, would it not?

General SHOFFNER. It would offer us a significant breakthrough. Yes, sir.

Senator SHELBY. Okay. What about the Soviet Union? What are they doing in this area? I mean, we can get a briefing on intelligence, but I just happen to believe——

General SHOFFNER. Let me give you a short answer.

Senator SHELBY [continuing]. They are not as far ahead on fiber optics as we are.

General SHOFFNER. Understanding them is difficult for us——

Senator SHELBY. I know that.

General SHOFFNER [continuing]. Because we have to guard against mirror imaging.

Senator SHELBY. Sure.

General SHOFFNER. He is employing today precision guided munitions that have a significant effect on the battlefield. They are somewhat different than the way in which we solve the problem. The major shift which we see him making, and it was articulated in his basic tactical document, Tactika 87, is an increased emphasis on fire support systems and long-range fire support systems. So that places him at a risk of command and control dependency for weapons systems which we would say open up an opportunity to exploit for us, and that will continue. We see those shifts taking place.

Senator SHELBY. My time has expired. Mr. Chairman, thank you for your indulgence.

APACHE

Senator LEVIN. Senator Shelby, thank you. I will ask a few questions on the Apache helicopter issue which has been touched upon by a number of us. The budget request proposes to terminate the Apache helicopter after next year. Last year we authorized a multiyear procurement for 4 years at 72 per year. Was it just budget pressure basically that forced you to cut back from that authorization?

General PIHL. That is correct, sir, and at the present time, just with 2 years left in our request, we will not be able to support a multi-year contract.

Senator LEVIN. All right. So you ignored the multi-year authorization not because you do not need the helicopters, but because of affordability?

General PIHL. It was a question of balance within the Aviation Modernization Plan.

Senator LEVIN. Is it fair to say that the helicopters would perform a useful function—it is an affordability issue which caused you to cut them back?

General PIHL. Sir, that is correct. The move from 975 back to 807 and the loss of seven battalions is a serious loss. We are just going to have to cope with that as we now rearrange our forces.

HELLFIRE

Senator LEVIN. Now, on the Hellfire. We have averaged 6,000 Hellfire missiles a year during the last 5 years. In this request there is a 4,200 request this year. Is this, again, a result of budget pressure or is this a matter of reevaluating the capability of the Hellfire?

General PIHL. Sir, it is certainly some of both. We are——

Senator LEVIN. Predominant?

General PIHL. Predominant in this case is the evaluation of the Hellfire to make it an effective system against the threat. Right now we will carry both vendors at minimum sustaining rate, 2,100 a piece, 50/50, out until the time that we have added the precursor charge, the tandem warhead, and the counter measure hardened seeker at which time we will go back to the 65/35 mix and bring the program back up to 6,000.

Senator LEVIN. But your minimum sustaining rate then is the requested rate of 4,200?

General PIHL. That is correct, sir.

SOVIET TANK MODERNIZATION

Senator LEVIN. A few more questions on the tanks. Last year the Army testified that it needed to buy approximately 3,000 tanks over a 5-year period in order to modernize the forward-deployed forces and to stay ahead of Soviet modernization. Has anything changed in terms of Soviet tank modernization in the last year that justifies a slower pace of modernization?

General PIHL. No, sir.

TANK PLANTS

Senator LEVIN. General Pihl, would it be possible to keep open even one tank plant if the Marine Corps dropped out and only the Army bought tanks?

General PIHL. Sir, we could keep one open, but it would be at bare-bones rates, and certainly not enough to keep two plants open.

Senator LEVIN. What is the minimum rate for one plant?

General PIHL. 516, sir.

Senator LEVIN. So that if the Marines did not buy 255 next year, that would be below that level?

General PIHL. Yes, sir, it would.

Senator LEVIN. So that would even be below the rate for one plant?

General PIHL. That is correct.

Senator LEVIN. General Franklin, does the Marine Corps support the President's budget which calls for 155 tanks this year and 255 next year?

General FRANKLIN. Yes, sir. That buys out our program, as you know. That is what we intend to do so that we do not have a split tank fleet. When the Army goes to Block II, we would not like to have some "vanillas" and some Block IIs.

Senator LEVIN. Now, on the Warren Tank Plant question. According to an Army analysis which has been provided to the committee staff, it would cost $135 million to go to a one-tank plant production capability. Is that the case, General Pihl?

General PIHL. Sir, we are looking at that number. It is probably more like 100, but that is close.

Senator LEVIN. All right. Again, according to the analysis provided to the committee staff, if we produced 600 tanks a year, we would save only about $11 million a year by having one tank plant as opposed to two tank plants?

General PIHL. Yes, sir.

Senator LEVIN. Now, Congress has stipulated a set of savings criteria for multi-year contracts. The criteria is a 10-percent savings on a discounted basis. Would the proposal to close the Warren Tank Plant meet the savings criteria that we insist upon for multi-year procurement?

General PIHL. No, sir, it would not. We would only achieve 2 to 3 percent savings, falling well short of the 10 percent multi-year requirements.

M-88 RECOVERY VEHICLE

Senator LEVIN. General Pihl, the amended budget request terminates the M-88 recovery vehicle program. As I understand it, the current recovery vehicle is not up to requirements. The question is what to do about it. If we were able to provide you with a small amount of money to examine a service life extension program on the current vehicle—to re-engine perhaps so that it could carry heavier armor—would that be justified, do you believe? That kind of a review?

General PIHL. Sir, we certainly would take a look at that. Given the demise of the recovery vehicle program in our present budget request, the current fielded force of M-88A1s we now have to do some very extraordinary things to do battlefield recovery of the 68-ton tank. We have to put a vehicle in front that is pulling and a vehicle behind that is anchoring to go downhill. We have put out very intensive safety precautions in order to carry that out. So, an upgrade of the engine and more power would probably be helpful and we would certainly take a look at it.

Senator LEVIN. Thank you. Senator Wilson.

Senator WILSON. Thank you, Mr. Chairman.

HEAVY FORCE MODERNIZATION

Gentlemen, as you know, I am new to the subcommittee. What really is the essential difference between the Heavy Force Modernization Plan that you are discussing now and the Armored Family of Vehicles concept?

General PIHL. Sir, the Armored Family of Vehicles concept proposed 28 to 29 different makes and models of a track-like vehicle in the Army's inventory. Estimated costs over a 10- to 20-year life cycle were enormous. The ability to field a division set at a time was just not in our affordability equation as we looked at it. So we took the best parts of the Armored Family of Vehicles program, which was commonality and modules—modularity—having commonality in the heavy protection level chassis with four different mission modules, and commonality the medium protection level chassis with two different mission modules—and we picked only the most important war-fighting vehicles in the first six vehicles that are in the package.

The replacement for the tank, the infantry fighting vehicle, the Howitzer, the engineer vehicle, the line of sight anti-tank, and the resupply vehicles are what are now package I of our Heavy Force Mod Plan.

So, essentially we have taken the analysis and the concept of the Armored Family of Vehicles and have merged that with our current product improvement programs that were already on the books, line-of-sight anti-tank and the Block III tank, into one plan. It is a significant reduction in scope and it is a very large determination on our part to modernize only those vehicles that are essential to the forward deployed fight.

Senator WILSON. Why is it that in pursuit of the Heavy Mod you are seeking the funding for the chassis in fiscal year 1990 when, as I understand it, if you were to wait a year, you would have a completion of the component maturity program?

General PIHL. Sir, two answers to that. First of all, the threat does not give us that year, but I will just assert that. The second is, we now have a program executive officer for Heavy Force Mod, Brigadier General McVey, and his deputy, Brig. Gen. Ron Hite, who is the Heavy Force Mod Futures Deputy PEO, now managing Heavy Force Mod-related dollars within our technology base.

So, I have a programmatic that looks like full-scale engineering development, with a Deputy PEO in charge of shopping from industry and shopping from the Government, running down two parallel tracks so we can take the tradeoff studies that are done by the Government in our laboratory, and the tradeoff studies that are done by industry, and come out with an optimum solution for a required operational capability statement and a cost and operational effectiveness analysis.

Now, to boil that down as simply as I can make it. We are, in the Government, demonstrating hardware right now in our test bed. A large caliber gun, a new engine, a suspension system, and a new armor package that we will integrate into an M1 test-bed. It will look like a Block III M1 tank.

We have the three original industry teams from the Armored Family of Vehicles also looking at concepts for common chassis. So, we will bounce those two against one another; we will let industry propose what the Government has already evaluated in their offerings as we make our choice between a Block III upgrade or a new battle tank. That is a very important decision process that we are engaged in.

In no way have we asked Congress for support of full-scale development of a brand new tank at the present time. I want to remind all that we are still in the tech base and in early R&D.

Senator Wilson. I suppose that being true, the answer to the question as to the affordability is something you cannot really determine at this time?

General Phil. Sir, we have projected the ability to buy armored vehicles from the year 1997 out through 2010, and if we are funded in weapons and combat track vehicles at about the rate we are funded now, we will buy within those six vehicles that we are proposing over time enough of them to put 1,000 vehicle chassis per year into our inventory. That is what we need to rearm a division every year so that our 10 divisions that are due in Europe by 10 days will be armed with the Block III tank, the future infantry fighting vehicle, the new Howitzer, and the engineer vehicle.

The notion of commonality and modularity is to run up for one chassis production line, and over 1,000 vehicle run you could have 700 tanks and 300 infantry vehicles that year with the application or mission modules. There would be great economies by pooling the resource that we are spending now to build armored vehicles in several locations in our country.

Senator Wilson. My final question I guess is a very basic one, and it was prompted in part by your response that we did not have the year to waste. What are the specific factors that have driven you with what seems to be an obvious sense of urgency to pursue the Heavy Mod?

General Shoffner. Sir, I think that clearly is a major decision to try to solve the problem of how to get out of the box. We do not see the threat diminishing, the rate of modernization diminishing. So, we have to do something other than taking 10 or 15 years to field the system. Changing the way in which we are managing the R&D and changing the way we are willing to field and distribute are major decisions. If we can do that, then I believe we have the potential to get ahead and stay ahead.

General Pihl. The answer last year, sir, when we had our antiarmor hearing, and today, is that the reactive armor appearing on Soviet vehicles has redressed the balance between armor and antiarmor between the Soviet Union and America.

The reason we are rushing to get the Heavy Force Mod plan and the Block II tank into our inventory is to try to be in the field with a tank that is superior to theirs 2 years ahead of the time that they field theirs in serious numbers. And so we have set this equation for the Block II to arrive ahead of the future Soviet Tank II, and the Block III to arrive ahead of the future Soviet Tank III. That is that year we do not have to take off.

General SHOFFNER. That is competitive pressure which we think that you must maintain at this time, and it is focused on keeping the conventional forces strong and competitive during this timeframe.

Senator WILSON. Very good. Thank you, gentlemen. Thank you, Mr. Chairman.

SOVIET PRODUCTION RATES

Senator LEVIN. Thank you. Just a couple of additional questions. How good is our information on the Soviet production rates? How confident are we that we could tell if there were a difference?

General SHOFFNER. More frequent coverage with national assets would probably help that significantly.

Senator LEVIN. How confident are we now? Do we have a relatively good degree of confidence?

General SHOFFNER. Well, I think from regression analysis of what you have seen fielded you can get some pretty good feel generally. But the change is what takes time, sir. So, we are slow to confirm the changes in rates and that is where more frequent coverage with limited assets would be helpful.

Senator LEVIN. Would on-site observation help on that if we know exactly where they are produced?

General SHOFFNER. Yes, sir.

Senator LEVIN. And we are confident there could not be any surreptitious production at other locations?

General SHOFFNER. Well, that is kind of a large operation. Yes, sir.

BLOCK III TIMETABLE

Senator LEVIN. One last question. On the timetable on Block III, I think you indicated the decision between the common chassis and between the Block III upgrade was on the first order in 1992.

General PIHL. Yes, sir. Fiscal year 1992.

Senator LEVIN. Now, are there any milestones between that decision point and now?

General PIHL. Oh, yes, sir.

Senator LEVIN. Do you have dates on those milestones?

General PIHL. We do, sir. I can submit them for the record or recap them.

Senator LEVIN. That would be fine, for the record.

[The information follows:]

TIMETABLE FOR BLOCK III UPGRADE

Between now and the common chassis decision point in fiscal year 1992, the timetable for the Block III tank contains two program reviews and four budget reviews. The program reviews are the Milestone I Heavy Force Modernization Review to initiate Concept Demonstration/Validation and the Milestone V Block III Review to decide to enter Full Scale Development. The four budget reviews include the review of the fiscal year 1991 budget in 4Q fiscal year 1989/1Q fiscal year 1990, the fiscal year 1992-96 FYDP review in 2/3Q fiscal year 1990, the OSD summer program reviews (budget actions) in 3/4Q fiscal year 1990 and the fiscal year 1992-93 Biennial Budget Estimate Submission to OSD in 1Q fiscal year 1991.

Senator LEVIN. Each of you, we are very much in your debt. We will have additional questions for the record. A number of my colleagues do have some questions so we will keep the record open for 48 hours. Thank you again, gentlemen. As always, we appreciate your testimony. It is very, very helpful to us in our endeavors.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR ALAN J. DIXON

APACHE

Senator DIXON. General Pihl, last year during the fiscal year 1989 appropriations process, Congress provided an add-on of $50.4 million to ensure production of 72 Apache attack helicopters. Later, Army leaders stated that they did not need this money but could produce 72 AH-64s without the added funds. Is this still your position?

General PIHL. At this time we are negotiating to procure 72 Apaches for fiscal year 1989. We are still of the belief that we can go on contract for 72 Apaches with the resources authorized. However, we do need the $50.4 million additional appropriated. These resources would provide for procurement of required simulator training devices and survivability equipment to support fielding the 72 Apaches.

Senator DIXON. Congress worked very hard to get the Army to develop an aviation master plan after the Army proposed to terminate the Apache production one time before. The plan was well received, thanks in large part to your efforts. Now, only a few months later, the Army seeks to abandon that plan. What is going on here?

General PIHL. The original Army Aviation Modernization Plan (AAMP) submitted to Congress last year was formulated under the assumption of a level funding concept. We used a base of fiscal year 1989 constant dollars at $3.5 billion with inflation and 12 percent real growth in the outyears. The recent reduced defense budget and the requirement for no real growth caused the Army to strike a balance in its overall program and also within major appropriations. Army aviation appropriation had to accept some trades and the decision was made to protect the future and the centerpiece of the AAMP, specifically LHX. In order to do this the tradeoff was made between funding the LHX and cutting Apache production and terminating the Army Helicopter Improvement Program (AHIP). The Army is in the act of revising the AAMP based on the current administration's direction of reducing the budget.

Senator DIXON. General Pihl, we understand the budget situation the Army faces. But, would you tell us what has changed in the threat since January to justify reducing the requirement and acquisition objective for the AH-64 down to 807 from 975?

General PIHL. The Army had to make some tough choices to stay within the President's budget guidelines. Trade-offs made supported the best security posture achievable. Termination of AH-64s still procures 807 aircraft which supports 40 of the 47 resourceable battalions. Assuming all 47 battalions made it to the fight, this equates to a 15 percent reduction in armed helicopter tank killing capability. However, some of our NG AH-64 battalions do not arrive until after D+60. This is an acceptable near-term risk that will be offset by the fielding of LHX in fiscal year 1997.

Senator DIXON. General Pihl, I understand the AH-64 is a major factor in the Army's armor/anti-armor plan. What percentage of the required tank kills are attributed to the AH-64s?

General PIHL. The Army is continually evaluating distribution/allocation of fires, locking into a single percentage is difficult and not totally accurate. However, a recent conventional arms study allocated aviation 20 percent of all tanks.

Senator DIXON. General Pihl, last year Congress approved an AH-64 multiyear program for 4 years. This was based in part on Army recommendations, which stated such a program would yield a cost avoidance of approximately $420 million over four single-year programs. Additionally, witnesses testified that the Apache was one of the centerpieces of the Army's anti-armor program, particularly at night. What analytical effectiveness data exists to substantiate that the four year multiyear program is still not required?

General PIHL. There has been no analysis done to substantiate that the four year multiyear program is still not required. While the Apache is one of the major efforts in the Army Aviation Modernization Plan (AAMP), the LHX remains the centerpiece. In order to strike a balance within Army aviation and to protect our investment for the future, it was necessary to accomplish a tradeoff between LHX, Apache, and the Army Helicopter Improvement Program (AHIP). The AHIP procurement was terminated and the Apache was cut. The effect of the cut precluded the ability to procure the Apache at a beneficial multiyear rate.

Senator DIXON. General Pihl, the new budget proposal reduces the total number of Apaches from 975 to 807. This reduction equates to the loss of seven attack battalions, all of which comes from the National Guard and Army Reserve. Is this correct?

General PIHL. No, sir. The breakout of 7 battalion reductions is 3 ARNG, 2 USAR, and 2 Active components.

AT-4

Senator DIXON. General Pihl, when the Army made the decision to procure the AT-4, they told this committee that their initial order was for 550,000 AT-4s, but that they would eventually purchase over one million. Now, the Army has cancelled AT-4 production for fiscal year 1991 and is only buying 550,000. Does this mean the Army does not need a lightweight, anti-tank individual weapons system?

General PIHL. The cancellation of AT-4 procurement in fiscal year 1991 is not an indication that the Army does not need a lightweight anti-materiel individual weapons system. Rather, the Army stopped procuring the AT-4 due to affordability when it fell below the funding line on the priority list.

Senator DIXON. General Pihl, I have read where the first 500 troops to use the AT-4 in training in Germany had over 80 percent first-round hits. Given such a successful accomplishment, it would seem the Army would be aggressively looking for ways to continue AT-4 production—not shut it down—or move into other higher risk programs. What other feedback has the Army found relative to accuracy, training ease, training cost, operational performance, and soldier confidence in the AT-4?

General PIHL. TRADOC, in conjunction with the Fort Benning AT-4 project office, will be conducting a CONUS post fielding training effectiveness analysis in midsummer and will conduct a similar analysis in Europe during the October/November timeframe. I will forward all findings/results when this information is available for release.

Senator DIXON. General Pihl, because the AT-4 is lightweight, thus retaining the soldier's mobility, isn't it possible that the AT-4 (or a product improved version) could successfully defeat all armored vehicles—or at least produce a mobility kill?

General PIHL. The Army procured the AT-4 to give the infantry the capability to defeat light armored vehicles (less than 300mm) a few hundred feet from their position. The AT-4 was never intended to be a tank killer for the infantry even though it does have some limited capability (flank or rear) to produce a mobility kill on all armored vehicles. We are aware of independent development efforts to improve the performance of the AT-4 to produce a mobility kill and will evaluate the results when they become available. The light armor capability of the AT-4 (or its follow-on) is intended to complement heavy armor defeating weapon systems (i.e., AAWS-M).

Senator DIXON. General Pihl, has the Army considered improving the AT-4's lethality to extend its ability to take on more difficult targets?

General PIHL. The Army has not considered improving the AT-4 to extend its ability to take on more difficult targets. We are aware of an independent development effort to improve the performance envelope of the AT-4 and will evaluate the results when they become available. The Army is conducting a Proof-of-Principle (POP) program on the congressionally funded Multi-Purpose Individual Munitions (MPIM) that will be complete in December 1989. The Army has not funded the Engineering Development of MPIM in the fiscal year 1990-1994 POM due to affordability and limit on TOA. The strategy is to complete POP and put the data on the shelf. Upon completion of POP, the MPIM program will again be evaluated along with other emerging technologies that might be available for a light anti-armor weapons system.

QUESTIONS SUBMITTED BY SENATOR TIMOTHY E. WIRTH

APACHE

Senator WIRTH. General Pihl, 2 years ago the Army decided to end procurement of the AH-64 Apache before any were distributed to the Guard. Congress turned that decision around and the Guard now is receiving Apaches. Now the Army wants to reduce 1990-91 production and close the line after 1991 just when the Guard and Reserve become the recipients of the major portion of the Apache production. Won't this decision preclude full issue of Apache to the Guard and Reserve?

General PIHL. No, sir. The Army will field 40 AH-64 battalions (26 Active, 12 ARNG and 2 USAR).

Senator WIRTH. General Pihl, the AH-64 battalions scheduled for deactivation include some "programmed" units that are neither manned nor equipped. In the case of the Guard units identified for deactivation, not only are they manned with and between trained and qualified personnel they also are equipped and therefore have facilities. Is it prudent to deactivate existing units when other "programmed" units remain in the force?

General PIHL. The units being inactivated do not arrive until after D+60. Only one unit activation remains and that unit deployment date is before D+30. The underpinning of our modernization decisions is warfighting. However, the NGB is in the process of reviewing the battalions identified based on warfighting to see if three battalions equipped with obsolete UH-1Ms (scheduled to get AH-64s) should be eliminated and those originally identified may be reflagged to assume the higher priority missions. This is an acceptable near-term risk.

Senator WIRTH. General Pihl, we have been advised that the Army is recommending deactivation of ARNG Apache battalions that are part of an existing "heavy" ARNG division. If that information is correct, your current plan would result in some ARNG "heavy" division being organized with an Apache battalion and other ARNG "heavy" divisions without an Apache battalion. What is the rationale behind that move?

General PIHL. These units do not arrive until after D+30. This is an acceptable near-term warfighting risk.

Senator WIRTH. General Pihl, you have stated that the LHX will not even begin to enter the Active Army inventory until 1996 and much later for the Guard and Reserve. Doesn't your interim plan rely on modernization with the AH-64 Apache? If so, why close the line prematurely?

General PIHL. AH-64 Apaches are being procured for attack helicopter battalions in the heavy divisions and corps. Sufficient Apaches are being procured to resource 40 battalions providing a sufficiently robust warfighting force. LHX does not replace the AH-64 but rather satisfies the Armed Reconnaissance (Cavalry) and attack requirements for light divisions.

QUESTIONS SUBMITTED BY SENATOR JOHN MCCAIN

ARMOR/ANTI-ARMOR

Senator MCCAIN. General Pihl, how is the total mix of U.S. armor and anti armor weapons now planned to change during fiscal years 1989-94? Please provide a breakout for each year by weapons type and model.

General PIHL. The Army will continue to emphasize a mix of systems (tanks, BFVs, ATGMs, helicopters, etc.) to fight the armor threat. Within this mix there will be quantitative and qualitative change during the fiscal years 1989-94 timeframe. Given current funding levels, the following chart reflects key fielded systems for the years indicated:

Category and item	Fiscal year—	
	1989	1994
Direct fire at (systems):		
Tank		
M1-A1	2,260	2,260
M1-A1 (Hvy Arm)	160	1,880
M1-A2	0	720
BFV/CFV	2,746	5,462

Category and item	Fiscal year— 1989	1994
Dragon	6,770	[1] 6,640
AAWS–M	0	[2] 120
Apache (AH–64)	530	807
Cobra (AH–1)	1,080	710
Indirect fire (munitions):		
Copperhead	19,600	24,500
MLRS–TGW	0	1,430
SADARM (155)	0	8,240
SADARM (MLRS)	0	7,500

[1] Day Trackers only.
[2] FUE.

Senator McCAIN. General Pihl, how do planned U.S. Army production rates of armor and anti-armor weapons compare with our estimates of Soviet production of similar types of weapons? Please provide data for tanks, anti-tank weapons, and attack and military aircraft equipped with anti-tank weapons for the period from 1985–1987, 1989, and estimates for 1990 and 1994.

General PIHL. Soviet production of armor and anti-armor systems significantly outpaces U.S. production of comparable systems. Despite recent Soviet pronouncements of reduced production of combat systems, there are no convincing indicators that those reductions have occurred. A comparison of U.S. and estimated Soviet production of tanks, IFVs, and attack helicopters is provided. ATGMs cannot be compared due to a lack of data on individual Soviet systems. However, we expect that Soviet ATGM production rates will increase based upon the Soviet's stated position that they are shifting to a more defensive posture, which calls for a greater density of ATGMs. The following data is provided in thousands of systems:

	1985–7	1989	1990	1994
[Deleted.]				
TOW(NON IFV)	[1] 1.4	[1] 0.2	[1] 0.2	[1] 0.2
AAWS–M	[1] 0	[1] 0	[1] 0	[1] 0.1

[1] Data on like Soviet systems not immediately available.

BALANCE OF TANK/ANTI-TANK HOLDINGS

Senator McCAIN. General Pihl, what is the current balance of tank and anti-tank capabilities in the NATO Central Region? Please provide a breakout by type of weapon for each NATO and Warsaw Pact country.

General PIHL. The current balance of NATO and Warsaw Pact tank and anti-tank capabilities is, of course, much more complex than mere comparisons of holdings—though the numbers of each type weapon are also significant. I will address both the numbers of these weapons and their relative effectiveness.

The current NATO (Central Region) mix of tanks includes over [Deleted] Warsaw Pact main battle tanks (MBT). The NATO tank figures include [Deleted] MBT with either a rifled or smoothbore 120mm gun. The remaining [Deleted] MBT are equipped with a 105mm or smaller gun. Among the NATO MBT are some [Deleted] M1A1 and M1A1 with heavy armor, [Deleted] Challenger MBT with special armor, and [Deleted] Leopard IIs. Only these [Deleted] MBT should be considered truly modern tanks, capable of surviving intense close combat encounters with modern Soviet close combat forces. The Warsaw Pact numbers include over [Deleted] MBT in the Future Soviet Tank I (FST I) class and over [Deleted] modern T80, T64B, and T72M1 MBT. These [Deleted] tanks are equipped with a 125mm main tank cannon, can fire an ATGM through that gun, and are fitted with composite laminate base armors. As many as [Deleted] of them may be fitted with explosive reactive armor. The remaining [Deleted] Warsaw Pact tanks opposite NATO's Central Region are T54/55, T62, and early T64/T72 systems. Though these tanks are less capable than their more recent successors, many are undergoing extensive modernization. In particular, the T55 is being completely renovated to keep it combat-worthy into the late 1990s. It is receiving additional frontal armor, more lethal kinetic energy ammunition, [deleted].

The diverse NATO and Warsaw Pact anti-tank holdings, tabulated in the table below, do not include all Warsaw Pact manportable systems, [deleted]. Of special note is that all modern Soviet tanks have an ATGM-firing capability; while their NATO counterparts do not. All NATO and Warsaw Pact attack helicopters and infantry fighting vehicles (IFV) have an ATGM-firing capability but most of their armored personnel carriers (APC) are not equipped with an ATGM mount.

The most lethal and modern ATGM are the (U.S.) TOW-2A and Hellfire ATGM. The TOW-2A is fired from the Improved Tow Vehicle (ITV), M2/M3 Bradley, and the AH-1 (Cobra) Helicopter. The Hellfire is fired from the AH-64 (Apache) attack helicopter. [Deleted.] The BENELUX countries have fielded a cross-section of Swingfire, Milan, Hot, and TOW launchers. Among NATO forces in the Central Region, only the U.S. has fielded tandem shaped charge ATGM (TOW 2A) [deleted].

The Warsaw Pact has fielded an impressive fleet of ATGM. It's most modern ATGM included the AT-8 [Deleted] tank gun-launched missiles, the AT-6 [Deleted] helo-launched missiles, the AT-4 and AT-5 IFV/A-T launched missiles, and the AT-7 man-portable ATGM. The AT-6 is particularly noteworthy [deleted].

As tabulated below, the Soviet forces in the Central Region possess over [Deleted] dedicated anti-tank guns and ATGM launchers (excluding tanks, attack helicopters, and IFV which fire ATGM). The remaining Warsaw Pact forces have about [Deleted] of these systems. Ongoing changes in Soviet force structure will result in a substantial increase in Warsaw Pact anti-tank holdings in the near term.

The following table reflects NATO and Warsaw Pact holdings in the (Soviet) Western Theater of Military Operations as of 1989. The Warsaw Pact force summaries do not include holdings in the [Deleted] NATO summaries exclude holdings by Norway, Spain, Portugal, Greece, Turkey, Italy, and Denmark:

[Deleted.]

Senator McCain. How does the Army estimate this balance will change with current trends by 1994?

General Pihl. Without significant force cuts from ongoing Conventional Forces in Europe (CFE) talks, the imbalance of tank and anti-tank numbers does not change appreciably by 1994. Soviet reductions of 10,000 tanks is by far the most significant and welcome development. However, the majority of tanks to be withdrawn will be older T54/55, T72, and T64 tanks which are well past their prime. [Deleted.]

Meanwhile, the Soviets are dramatically increasing the density of anti-tank systems in the forward areas. [Deleted.]

NATO force modernization initiatives could help to mitigate some of the gains of the Warsaw Pact into the early 1990s. Of particular note are the Abrams block improvement program, upgrades to the Milan and Hot ATGM, and fielding of attack helicopters within the Belgian and Dutch forces. [Deleted.] The Euromissile Group is nearing completion of the Milan-2T and HOT-2T upgrades for these missiles. Both involve the addition of a precursor charge in front of the main missile warhead; [deleted]. Both the Hot and Milan upgrades should reach the fielded force by 1991. U.S. fielding of the AAWS-M will dramatically enhance our infantry's medium anti-tank capabilities by 1994. This system will be lethal against all Warsaw Pact tanks through the FST II tank. It will be an attractive ATGM system for acquisition by most of our NATO allies.

Sustained U.S. fielding of the TOW-2A and introduction of lethality improved Hellfire will ensure long-range (heavy) force capabilities against modern Soviet tanks. Continued U.S. development and fielding of the advanced TOW warheads will sustain the lethality of NATO forces [deleted]. These new TOWs may be fitted for use on the FRG's Jaguar, the UK's Lynx attack helicopter, and on several thousand U.S. ITV and Bradley Fighting Vehicles. Last, both Belgium and the Netherlands are negotiating to purchase attack helicopters for their Central European forces. The Dutch are considering a purchase of [deleted] Agusta helicopters, equipped with a TOW launcher. The Belgians have recently purchased 28 of these attack helicopters. An increase of [deleted] these aircraft would markedly enhance NATO security in the Central Region; however, budget constraints will likely delay and/or reduce the number of actual helicopters to be acquired.

Senator McCain. What is the balance affecting North and South Korea, taking U.S. Army and Marine Corps forces into account?

General Pihl. The Marines have only an advisor contingent in South Korea, therefore no USMC tank and anti-tank forces are included in the table below. U.S. Forces in Korea (USFK) figures are listed separately from those of the Republic of South Korea (ROK). As you will note, there is a favorable balance between North Korean and South Korean/USFK tank and anti-tank forces. Though the tank numbers reflect a quantitative advantage for North Korea, the ROK forces are indigenously producing a very modern spin-off of the M1 Abrams tank—the 105mm

ROKIT. Up to [deleted] of these systems may be fielded by the end of 1989. The U.S. forces are currently equipped with the M60A3 tank [deleted]. North Korea's tank forces are comprised largely of antiquated Soviet and Chinese T-34, T-55, Type-59, and T-62 series tanks; none of which are frontally protected from the ROKIT's high-explosive anti-tank and kinetic energy rounds. South Korea's attack helicopter advantage also helps in the tank imbalance. The ROK Army possesses [deleted] AH-1 (Cobra) and [deleted] Hughes (MD500) attack helicopters, all equipped with TOW ATGM launchers. [Deleted.]

TANK CAPABILITIES

Senator McCain. General Phil, what are the current and programmed deficiencies in U.S. Army and Marine Corps tank and anti-tank capabilities? Please provide a detailed list by category of weapons systems.

General Pihl. The primary deficiencies imposed by fiscal constraints is the Army's inability to simultaneously modernize its armor and anti-armor systems, even within force package elements. For example, the Army is modernizing divisions with Abrams tanks, while fielding of the Bradley fighting vehicle to those same divisions may lag by 18 to 24 months. Within a given force package this also means that various mixes of new and old systems will be present, impacting those units' capabilities to execute combined arms doctrine.

The Army is addressing this problem in several ways. First, it has prioritized fielding by force package to maximize the effect of modernization. It also has undertaken efforts to increase procurement of critical items. For example, the Army is requesting an increase in Bradley procurement to 600 systems per year in order to prevent the fielding gap with Abrams from widening.

The long term correction is embedded in the Army's Heavy Force Modernization plan. In the plan, the Army intends to simultaneously modernize its tank (Block III), Infantry Fighting Vehicle (FIFV), dedicated anti tank system (LOSAT), plus key combat support vehicles.

A second deficiency is in munitions sustainability. Ideally, the Army should have sufficient stockpiles of munitions to sustain combat operations until the mobilized industrial base can produce at a rate to support combat operations. The Army has accepted significant risk in this area because of the significant expense of producing large stockpiles of ammunition items that become obsolete as technology overcomes capabilities.

To correct the sustainability problem, the Army, in its Armor Anti-Armor Modernization Plan, recommended: Increased procurement of TOW missiles; organize and execute a Hellfire product improvement plan; increased SADARM procurement; increased Volcano procurement.

ARMOR/ANTI-ARMOR CAPABILITIES

Senator McCain. General Pihl, I am deeply concerned that we may have to fight along side allies with major deficiencies in their armor and anti-armor capabilities, and that most of these allies face even more severe financial constraints than we do. Please provide an assessment of current strengths and weaknesses of the mix of armor and anti-armor weapons in each NATO allied country, and in South Korean forces.

General Pihl. I share the Senator's concern about allied warfighting capabilities. In nearly every aspect, U.S. M1A1 and M1A1(dU) tanks are far superior to the U.K.'s Chieftain and Challenger and the Leo I and II tanks employed by the West German, Netherlands, Belgium, and Canadian forces. [Deleted.] All NATO ATGM and infantry anti-weapons are effective in defeating Soviet tanks from the flanks and rear, and can destroy all other Soviet systems on the battlefield from any attack angle.

The South Korean forces are equipped with high quality systems as compared to the North Koreans. The 105mm ROKIT tank is an M1 derivative with a good fire on the move capability. [Deleted.] It is very agile and has long range sighting capabilities at night and in adverse weather. The South Korean fighting vehicles are less capable than the (U.S.) Bradley, but stack up well against North Korean APCs. The quantity and quality of South Korean attack helicopters are far superior to their small number of North Korean adversaries. The helo-launched TOW missiles are capable of destroying all North Korean tanks from any aspect and at extended ranges.

ARMOR/ANTI-ARMOR FORCE PLANS

Senator McCain. General Pihl, please indicate how currently known force plans will change the mix of strengths and weaknesses in each allied country by 1994.

General Pihl. Our NATO allies have a variety of ongoing programs to improve their tank and anti-armor capabilities; however, budget constraints may delay the introduction or reduce the quantity of these upgrades. I will summarize the major programs expected to improve the armor/anti-armor forces through 1994.

[Deleted.] The FRG is co-developing Milan and Hot ATGM improvements with the U.K. and France. Both of these missiles will receive a tip charge; akin to the improvement previously made to the U.S. TOW-2A. [Deleted.]

The French are in the late stages of development on the new LeClerc MBT. It will mount a 125mm (smoothbore) main gun, a 1500hp Hyperbar Diesel engine, and special armor technology for its frontal armors. [Deleted.] The LeClerc's principal strengths will be its unparalleled agility, low silhouette (as compared to M1 and Leo II), and its advanced electronics and sighting systems. The French are involved in Euromissile developments of the Milan IIT and Hot IIT, and can be expected to field these ATGM before 1994. [Deleted.]

The U.K. is in a quandry about tank modernization. It is desperately trying to revive its tank industry by building a replacement for the Challenger and Chieftain for the 1990s. Thus far, they have been unsuccessful in developing a tank which would be (economically) competitive with the U.S. M1A2 or the FRG's improved Leo II. The decision on whether to purchase abroad or to internally produce a new tank is expected from the Prime Minister in 1990. Incremental Chieftain and Challenger armament improvements are continuing. The U.K. has given no indication that it will be acquiring the Euromissile Group's advanced Hot and Milan warheads.

The Belgians are beginning to upgrade their antiquated Leo I tank fleet. [Deleted.] The Belgium government's decision to acquire 28 Agusta attack helicopters (equipped with TOW launchers) will enhance their anti-tank capabilities in the forward areas, but will be too few in number to effectively cover the 1st (Belgian) Corps' area of responsibility.

The Netherlands is continuing to modernize its personnel carriers and fighting vehicles and has purchased over 400 Leo II main battle tanks. Its anticipated purchase of [deleted] Agusta attack helicopters would significantly bolster Northern Army Group's anti-tank capability, but will likely be delayed into the mid-1990s because of budgetary constraints.

Unquestionably, the most significant armor/anti-armor developments among the NATO bloc through the mid-1990s will be those among the U.S. forces. Continued fielding of the M1A1(dU) and the 1993 fielding of the M1A2 will significantly upgrade the NATO deterrent force. [Deleted] U.S. force proliferation of the Apache helicopter and its (improved lethality) Hellfire ATGM will provide us with improved armor defeating capabilities. Our fielding of advanced TOW warheads will sustain our ground forces' long range anti-armor capabilities. Many of these programs will be attractive options for our allies where there are opportunities for foreign military sales.

ARMOR/ANTI-ARMOR

Senator McCain. General Pihl, what major problems could the weakness in allied tank and anti-tank capabilities create in a conventional conflict in NATO and Korea?

General Pihl. Armor/anti-armor (A3) competition with potential adversaries is a dynamic process. As threat forces modernize to improve lethality and survivability of A3 systems, currently fielded allied systems require modernization to match or overmatch threat improvements. U.S. Army warfighting doctrine, as well as comparable allied doctrine, requires A3 systems with the lethality and survivability needed to kill and survive in the close combat battle. Insufficient quantities or capabilities of A3 systems and associated munitions increase the risk of not being able to successfully execute our warfighting doctrine. Within resource constraints, our A3 modernization plan is structured to correct identified battlefield deficiencies in A3 capability. Our major allies also have some ongoing A3 modernization programs (Leopard III, Challenger, Milan) which are similarly affected by resource availability.

COMBINED ARMS APPROACH

Senator McCain. General Pihl, is the Army still using the combined arms approach to the armor/anti-armor problem? Do our major allies also use that same approach?

General Pihl. Yes, both the U.S. and our major allies use the same approach. Though individual systems vary, each of us intend to employ a mix of deep fire and close combat systems to disrupt and defeat threat armor. The current mix consists of aircraft, attack helicopter, indirect fire systems, as well as tanks and mounted/dismounted anti-tank guided missiles. This continued emphasis on combined arms is reflected in both U.S. and allied efforts to improve the lethality and survivability of this mix, while examining variations in the components to achieve better synergy. As a result, the Army intends to develop improved helicopter anti-tank capabilities (Hellfire on Apache) TOW improvements, M1 Block Mods, and AAWS–M to replace Dragon. A look at allied efforts also shows parallel efforts in tank modernization and ATGM development. In summary, we intend to fight as combined arms teams for the foreseeable future.

DAY/NIGHT HELICOPTER

Senator McCain. General Pihl, are there any other helicopters available from Western sources which have the day/night anti-tank capability of the Apache?

General Pihl. No, sir.

ANTI-TANK/ANTI-ARMOR

Senator McCain. General Pihl, does the United States and its allies have enough anti-tank and anti-armor capability today?

General Pihl. No. Despite improvements in U.S. and NATO capabilities over the past several years, the threat has maintained its quantitative lead and has improved the quality of his systems. This trend continues unabated. That is why we must continue to procure modernizing systems (Abrams, Bradley, etc.) and apply product improvements to address our known deficiencies.

Second, we must continue to emphasize R&D to develop and field future systems which will capitalize on advanced technology and overmatch the future threat.

Resource constraints obviously force choices—we cannot both buy all of the current systems which are needed and develop future systems. We believe, however, that we have a balanced program to address critical programs in both the near and far term.

APACHE

Senator McCain. General Pihl, what could be added to the U.S. and NATO inventories which would give a bigger increase in a Corps' anti-tank capability than the AH–64?

General Pihl. An armed reconnaissance/scout aircraft that would improve the survivability of and compliments AH–64s we are procuring by allowing them to stand off further from the targets while in defilade and not be surprised by threat air-to-air systems.

Senator McCain. General Shoffner, as a representative of the combat development community Army, how much of a decrease in tank killing capability is the Army being asked to accept based on the 15 percent decrease in Apache inventories and force structure?

General Shoffner. Termination of AH–64s still procures 807 aircraft which supports 40 of the 47 resourceable battalions. Assuming all 40 battalions made it to the fight, it is true this equates to a 15 percent reduction in armed helicopter tank killing capability. A recent conventional arms study allocated aviation 20 percent of all tanks killed. Hence, the reduction to Apache inventory of 15 percent would contribute a much smaller percentage reduction to overall Army tank killing capability.

TANK KILLING SHORTFALLS

Senator McCain. General Shoffner, what is the combat development community proposing to fill this Army-created void at a time when the Army is actively seeking fixes to other tank-killing shortfalls?

General Shoffner. What we wanted was armed AHIP, unfortunately OSD did not support that program. Without armed AHIP there is a near-term risk we will have to accept until the fielding of LHX armed reconnaissance helicopters in fiscal year 1997.

TANK KILLING CAPABILITIES

Senator McCain. General Shoffner, what formal effectiveness analysis have you done to show that the diverted Apache funds would produce more warfighting capability if spent elsewhere? Please provide a copy of that analysis for the record.

General **Shoffner**. The Army does not have any formal effectiveness analysis today which specifically addresses the trade-off value of other systems vis-a-vis the AH-64 in terms of the resulting overall warfighting capability impact. However, the rationale and judgment used in developing the Army aviation modernization plan was used as a basis to identify feasible trade-offs. The Army aviation modernization plan provides a time-phased aircraft fleet that best meets, within resource constraints, the near-term employment plans of the warfighting commands and the critical operational capabilities needed for success on future battlefields.

A part of the diverted Apache funds was intended to provide support for the AHIP (AH-58D) as an interim, near-term solution. While the Army aerial scout test demonstrated that the Apache, with its sophisticated target acquisition and night vision sights, was very effective in some scout roles, due to its size it was frequently detected and engaged by threat systems. With its cost and its low scouting survivability, it is not an affordability, operationally cost-effective scout. The AHIP program was not, however, supported at OSD. The LHX is currently the only viable armed scout alternative.

The 1987 LHX Operational COEA clearly demonstrated that the LHX is the most cost-effective alternative to fix the Army's long-term (beyond 1996) need. With its multi-role capabilities, the LHX will be a very cost-effective aircraft for providing scout and attack capabilities for light forces.

TOW

Senator McCain. General Pihl, the Army issued a TOW second-source RFP on January 13. What is the currrent status of this RFP and when are the proposals due?

General Pihl. The second-source proposals were received on April 16, 1989; we expect to make a contract award by June 21, 1989.

Senator McCain. I understand that Hughes Aircraft, the current producer of TOW, has the capability to produce 42,000 missiles per year on a normal two-shift basis. I note that the Army plans to buy only 9,455 TOWs in fiscal year 1990 and only 13,284 in fiscal year 1991. The Marines will be buying less than 1,000 in each of these years. Why does the Army feel a second production source is needed when projected TOW production rates are only about one-half of the current capability?

General Pihl. Hughes Aircraft, Tucson, Arizona, facilitized to an annual production rate of 42,000 TOW missiles on a 2-8-5 augmented work shift. However, TOW-2A missiles which are currently being procured by the U.S. Army and USMC are restricted to a maximum production rate of 30,000 per year. The 12,000 missile balance is limited to earlier configurations of the TOW missile which is procured for FMS customers. Facilitization at this level is maintained for surge purposes. Minimum sustaining rate at the Hughes facility is 12,000 missiles per year (all configuration). The Army quantity combined with the Marine quantity and the projected 6,000 plus FMS quantity will adequately workload the Hughes facility in fiscal years 1990-1991. The Army and Marine quantities are projected to increase to 20,000 per year beginning in fiscal year 1992. That quantity combined with FMS will be enough to support two facilities in a competitive environment with reduced price and increased surge capability.

Senator McCain. General Pihl, I understand that the winner of the second-source will have a capability to produce 12,000 missiles per year. Is this correct? What will it cost to facilitize the second-producer for a rate of 12,000 per year? Has the Army made an analysis of the payback period required to recoup the investment in qualifying and facilitizing a second-source producer, and if you have, would you please comment on the results of the analysis?

General Pihl. Yes, the second-source contractor will be required to facilitize to a rate of 12,000 missiles per year. This rate is required in order to posture the second source for head-to-head competition with Hughes Aircraft in fiscal year 1992, the third year of dual source procurement. In 1987 the industrial engineering activity group of AMC performed a TOW second-source facilitization study which resulted in the following fiscal year 1989 projected cost.

A facilitization cost of $30.6 million would be required if the contractor elected to make the majority of the components in-house;

A facilitization cost of $15.8 million would be required if the contractor elected to procure the major portion of the components; and

A cost comparison for annual sole source, multi-year sole source and dual source, based on government projected unit cost estimates has been developed; the projected payback from second source based on this analysis would be in 1993 vs. sole source annual procurement and 1999 vs. sole source multi-year procurement.

Senator McCain. General Pihl, I have been advised that the government and Hughes Aircraft have invested in excess of $82 million to establish the 42,000 IPF missile per year capability. Is my information correct?

General Pihl. A report published by the industrial engineering activity group of AMC dated 6 March 1987, reported a government facilitization cost of $52 million and a Hughes Aircraft investment of $30 million.

Senator McCain. General Pihl, would you please comment on the quality, performance, and delivery schedule with respect to the TOW missiles being produced at the Hughes facility at Tucson?

General Pihl. As of May 23, 1989, Production Acceptance Testing (PAT) for the TOW-2A missile has resulted in the acceptance of all 39 lots. Each lot represents approximately 1,000 missiles, some of which contained TOW-2 missiles for FMS. Of the 39 lots, 166 missiles have been flight tested resulting in only two missile failures or 99 percent success rate. To date, no TOW-2A missile lots produced by HAC have been rejected due to PAT failures. Since 1987, Hughes Aircraft has maintained a delivery schedule 1 month ahead of contract requirement except when late delivery of GFE delayed missile production.

[Whereupon, at 3:48 p.m., the hearing was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1990 AND 1991

TUESDAY, MAY 16, 1989

U.S. SENATE, SUBCOMMITTEES ON CONVENTIONAL FORCES AND ALLIANCE DEFENSE; READINESS, SUSTAINABILITY, AND SUPPORT; AND MANPOWER AND PERSONNEL; COMMITTEE ON ARMED SERVICES,
Washington, DC.

ALTERNATIVES FOR SUBSTITUTING RESERVE FORCES FOR ACTIVE AIR FORCES, WITH EMPHASIS ON RAPID REINFORCEMENT OF EUROPE

The subcommittees met jointly in open session, pursuant to notice, at 2:35 p.m., in room SR-222, Russell Senate Office Building, Senator Carl Levin (chairman of the subcommittee) presiding.

Committee members present: Senators Levin, Exon, Glenn, Thurmond, Wilson, McCain, and Gorton.

Committee staff members present: Richard D. DeBobes, counsel, and Daniel G. Sakura, research assistant.

Professional staff members present: Robert E. Bayer, Robert G. Bell, John J. Hamre, William E. Hoehn, Jr., David S. Lyles, Michael J. McCord, Frederick F.Y. Pang, and Patricia L. Watson.

Minority staff members present: Patrick A. Tucker, minority staff director and counsel; Romie L. Brownlee, deputy staff director for the minority; Jonathan L. Etherton, Judith A. Freedman, George K. Johnson, Jr., Ronald P. Kelly, George W. Lauffer, and Durwood W. Ringo, Jr., professional staff members.

Staff assistants present: Barbara L. Braucht, Lisa Hastey, Lori M. Jackson, Mary J. Kampo, and Cindy Pearson.

Committee members' assistants present: Kenneth N. Luongo, assistant to Senator Levin; Jeffery B. Subko, assistant to Senator Exon; Phillip P. Upschulte and Milton D. Beach, assistants to Senator Glenn; Terrence M. Lynch, assistant to Senator Shelby; Dudley Carlson, assistant to Senator Wilson; Anthony H. Cordesman, assistant to Senator McCain; and Robert M. Soofer, assistant to Senator Gorton.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator LEVIN. Good afternoon, everybody. This afternoon three subcommittees, the Subcommittee on Conventional Forces and Alliance Defense, the Subcommittee on Readiness, Sustainability, and

Support, and the Subcommittee on Manpower and Personnel meet to receive testimony on alternatives for substituting Reserve Forces for Active Air Forces with emphasis on the rapid reinforcement of Europe. This is a complicated and far-reaching question which is why three subcommittees are jointly holding this hearing.

There are two key issues under consideration this afternoon. The first issue concerns the question of Reserve substitution as a strategy for coping with tighter defense budgets. Last year the Defense Authorization Act contained a provision directing the Department to evaluate the possibility of shifting more of the flying mission to Reserve Forces. While the immediate question concerned the growing problem of retaining pilots in the Air Force, the underlying issue is the validity of substituting Reserve Forces for active duty forces as a strategy for preserving as much defense capability as possible in a time of shrinking defense budgets. Air Force Reserve and Air National Guard units tend to have very high rates of combat proficiency and readiness. Indeed, in some competitions Reserve units have outperformed Active units. Senator Glenn, as Chairman of the Manpower and Personnel Subcommittee, has taken the lead in this important question, and I congratulate him for his initiative.

I should point out that the DOD never submitted the study required by section 611 of the Defense Authorization Act. Instead, we received a letter saying the issue is under continuing examination. Today, we hope to learn more about what the Department has concluded from its ongoing review.

The second key issue under examination this afternoon concerns a far-reaching issue currently under Active discussion in Washington and every capital in West Europe: What should be the U.S. contribution in the future in the conventional defense of Europe? Forty years have passed since the signing of the NATO Treaty. After 40 years should we continue to place such a large portion of our combat capability overseas in peacetime? Is it time to examine the question of returning some of our forward deployed forces and substituting Reserve units in the United States that can be quickly returned to Europe in a crisis?

In this regard I would note the special case study of the Air Force's 401st Tactical Fighter Wing. Two years ago the Spanish Government decided to obtain removal of the 401st Tactical Fighter Wing from Spain. NATO found a new location for the 401st in Crotone, Italy. We are deeply appreciative of Italy's willingness to accept the 401st. Yet, in a time of shrinking defense budgets and reduction of tensions in Europe, we should again examine this question. Let me emphasize that this Senator—and I believe it is the case for other Senators—has made no final decision on the issue of the 401st, but the issue does need to be thoroughly examined.

We have a long afternoon ahead of us. There will be three panels, and I will now generally review the organization of the panels and make specific introductions later at the start of each panel.

First, we will hear from Mr. Robert Hale, Assistant Director for National Security at the Congressional Budget Office. The Armed Services Committee asks the Congressional Budget Office to examine the Reserve substitution issue. The CBO examination is particularly important because DOD will not respond to the study requirement contained in section 611 of last year's authorization act.

The second panel will consist of three senior policymakers in the Department and one general officer from the Air Force to discuss both the question of Reserve substitution and reducing forward deployed Active Forces with rapidly deployable Reserve units.

The third panel will consist of representatives from the Air Force Reserve and the Air National Guard.

Because of the large number of witnesses and the numerous panels, I want to let my colleagues know that I hope to move quickly through the statements and into the questioning. Any Senator can ask any question that he wants to of our first witnesses. However, I will not poll Senators for questions on this first panel, but ask that if you have questions for the witnesses on this first panel that you just let me know and we will try to ask them as they go along. When we get to the second panel, we will resume normal polling procedures for the Senators that are present.

Before we proceed to this panel, let me ask my colleagues if they have any preliminary remarks. I do not know what the protocol is when you have three subcommittees. I presume, though, we go to our ranking member and then we go to Senator Glenn. Senator Wilson.

Senator WILSON. Thank you, Mr. Chairman. I look forward to this hearing. It is a complex matter, and it deals with a much broader issue than is crystallized just in terms of the very important consideration of the 401st Tactical Fighter Wing.

The fact is that we are budget-driven to make certain changes in the way that we operate because outlays can be most immediately realized from force level reductions. There has been in all the services a concerted effort to try to maximize the performance and the function of Reserve and National Guard units. I have reluctantly and unwillingly supported that simply because I think that a certain logic dictates it. There are, however, some who question whether or not that is an expedient that cannot be pushed too far.

I have here something that I am in the process of looking at. It is a study by the Brookings Institute on the U.S. Army Guard and Reserve that suggests that in some cases, notably in the case of what the Army has done, that the savings are marginal and that the loss of operational effectiveness is significant.

I have neither made up my mind with respect to the 401st nor with respect to the overall question of how far we can push the functioning of what has been Activy duty requirements onto Reserve and Guard units. We are constrained to learn the answer to that question. And, to be honest about it, what I would say is that I think that there is no question that we can achieve major cost savings by the reassignment of function and also by the redeployment of certain Active duty units, but I think that we are going to have to do that on a case-by-case basis. And as we come to focus today on the specific question of what should be done as the 401st Tactical Fighter Wing is displaced from Torrejon Air Base in Spain, I think we have to ask ourselves are we really willing to completely undermine what has been an explicit national strategy of forward defense.

We are, in the context of that particular tactical fighter wing, facing a situation which in southern Europe and NATO leaves us with no alternative in a very constrained atmosphere, one that is affected by the fact that we cannot keep treaty obligations to maintain two carrier battle groups there, one that is constrained by the growing ferment in the Middle East, one that is constrained by a good deal, in short, more than simply budget functions as important as they are.

So, I have not yet made up my mind and will listen with interest to the witnesses this afternoon. But it seems to me that this particular hearing and the focus upon the fate of the 401st gives a very concrete and important example of why we must go at this not slowly—we do not have that luxury—but very carefully in weighing and trying to balance cost considerations against those of the basic purpose and the basic mission of units that we are now thinking of reassigning. It seems to me that we cannot view the cost factors in isolation from the commitments that we have under treaty and other agreements. Thank you.

Senator LEVIN. Thank you, Senator Wilson. Senator Glenn.

Senator GLENN. Thank you very much, Mr. Chairman. I want to say that I look forward to this hearing because I think it is important for us to understand the basis for the Active and Reserve mix in the military services and whether or not the current mix is effective and efficient in sustaining the combat missions of the military services. From my perspective I have been pressing this matter on the Manpower Subcommittee over the last 5 years. The issue of Reserve substitution must be considered in the context of whether or not the Department of Defense has a purposeful and coherent total force policy and whether or not there is an effective process in the Department of Defense for carrying out this policy.

I have concluded from hearings the Subcommittee on Manpower and Personnel has had on the issue that there is a leadership vacuum in this area, and that the total force policy is less of a reality than the Department of Defense would like for us to believe.

For example, at the joint hearing of the Readiness/Manpower Subcommittees in April of last year, I asked Maj. Gen. James Smith, the Director of Operations of Readiness and Mobilization of the Office of the Deputy Chief of Staff for Operations and Plans in the Army, about the allocation of missions in the Army under the total force policy. I wanted to know who was responsible for deciding the mix of missions assigned to the Active and Reserve components in the Army and just how the process worked. And the answer I received was that the Chief of Staff of the Army was responsible and that he relied on his staff, his field commanders, and the theater CINCs to help him. Well, as I pointed out in that hearing, something must be wrong with this because there are indications that the Active and Reserve mix, in the Army at least, is out of balance.

The Army Reserve is relied on to provide 70 percent of the Army's combat support and combat service support forces. Yet, in last year's Reserve Forces Policy Board report, 45 percent of Army Reserve units were rated below C-3, not combat ready. Now, that has been going on for some time. This year's report fixes that problem by just omitting the previously reported readiness statistic.

They just ignored it. My comment to that is you cannot hide your head in the sand when you have a problem. You have to face up to it and solve it. And this problem has been going on for many, many years and we have been pointing it out for many, many years.

On the other hand, the Air Force appears to have a better integration of its Reserve components into its total force. For example, the Air Force Reserve and Air National Guard provide substantial flying units and air crew support to the day-to-day missions of the Air Force. Specifically, the Air National Guard provides 86 percent of strategic interceptor forces based in the United States, 50 percent of tactical reconnaissance forces, and 36 percent of tactical air support forces.

The Air Force Reserve and Air National Guard combined provide 59 percent of theater airlift forces, 45 percent of air rescue and recovery forces, and 40 percent of weather reconnaissance forces. In addition, they provide 93 percent aeromedical evac air crews, 50 percent of the strategic airlift air crews, and 38 percent tanker cargo air crews, big percentages.

In contrast to the 45 percent not combat ready figure for the Army Reserve, only 6 percent of Air National Guard and 10 percent of Air Force Reserve units were rated in the not combat ready category last year, so the difference is substantial.

In proven capability of the Air Force Reserve and Air National Guard to perform their assigned missions, their high state of readiness and the potential for a more cost-effective Active/Reserve mix were the reasons for the direction in the conference report on the fiscal year 1989 Defense Authorization Act that the Secretary of Defense evaluate critically the capability and desirability of realigning portions of the Active flying missions in the Air Force to the Reserve and the Air National Guard.

The conference report also noted that the such a realignment had the potential to alleviate projected aviator shortages in the Active Force and that there were no apparent problems in aviator manning in the Air Force Reserve and the Air National Guard.

The Secretary of Defense was further directed to submit a report to the Committee on Armed Services making recommendations based on his evaluation, make those reports by January 1, 1989, and to include any proposed realignments in the fiscal years 1990–1991 DOD budget requests. The required report is long overdue. We have not received it yet, this 16th day of May, 1989. All we have so far are platitudes, the most recent being a one-page letter dated February 16 from former Deputy Secretary of Defense Taft. It gives a paragraph of generality on total force policy and concludes by saying that a fresh look at Active/Reserve Force mix is needed, and such a review should be provided—would be provided us as soon as it is completed.

Well, I think we have had enough of the platitudes and the words and phrases. We would like to see the plan come over here and what the balances are, what the DOD recommends that they should be. I think we need some leadership and action in these areas.

Today we will be looking at the potential for deactivating some Active duty Air Force units and redistributing their aircraft to existing Guard and Reserve squadrons. One of the specific issues we will be considering is whether it makes both military and budgetary sense to bring the 401st Tactical Fighter Wing of 72 F-16s back to the United States from Torrejon, Spain, where it is currently based, rather than relocating it to Crotone, Italy. Such a move would save almost half a billion dollars in military construction costs alone and, as I assess it, such a move would probably have only a marginal effect on our true air warfighting capabilities in Europe; but then, against that we have to weigh the fact that we are trying to keep the NATO Alliance together, make certain that they are aware of their burdensharing responsibilities, and so it is a difficult situation for us.

But as far as the warfighting capabilities of that particular group with current in-flight refueling, we could move fighter wings from the United States to their required location in Europe in a developing crisis almost as rapidly as from Crotone at the remote southern tip of Italy, which is not looked at as being a combat base.

So, current implementation of the total force policy is a very serious matter involving the combat readiness of our forces, the lives of our men and women in uniform who are forward deployed, and who rely on rapid reinforcement by combat ready forces. I look forward to the testimony of our witnesses along this line, Mr. Chairman.

Senator LEVIN. Thank you, Senator Glenn. Senator Thurmond.

Senator THURMOND. Thank you, Mr. Chairman. I want to join you in welcoming the members of the various panels.

I believe that at an initial glance the concept that we are discussing here this afternoon may have some merit. By withdrawing Active Air Force units from Europe and assigning the aircraft and missions to the Air Reserves and Air Guard, we certainly will save funds. I will also agree that based on the skill of the Reserve pilots, there will be little degradation of mission capability. My concerns are what this shift in forces will mean in terms of reaction time and in resources required to deploy these Air Reserve units in time of crisis.

Additionally, what are the implications of withdrawing Active Air Force units from Europe while we are in the midst of the reductions of conventional forces negotiations? Are we signaling that we are willing to withdraw air power from Europe without getting something in return from Mr. Gorbachev? I urge caution in this endeavor. We do not want to preempt the President in his negotiations to achieve parity forces in Europe. Thank you, Mr. Chairman.

Senator LEVIN. Thank you.

Senator THURMOND. I have a question for the panel. Do you want me to go forward now or wait until later?

Senator LEVIN. The questions will come later, Senator Thurmond.

Senator THURMOND. Thank you.

Senator LEVIN. Senator Dixon has asked that his prepared statement be included in the hearing record.

[The prepared statement follows:]

PREPARED STATEMENT OF SENATOR ALAN J. DIXON

Mr. Chairman, I want to join you in welcoming our witnesses to the hearing this afternoon. The Subcommittee on Readiness, Sustainability, and Support appreciates the opportunity to participate in this joint hearing.

I think the two issues you highlighted in your opening remarks—the question of Reserve substitution as a strategy for coping with tighter defense budgets and the question of whether the United States needs to continue to keep such a large portion of our combat capability overseas in peacetime—are very timely ones.

In the Subcommittee on Readiness, Sustainability, and Support we had two hearings last week in which we received testimony that the fiscal years 1990/91 Defense Budget and the current Five Year Defense Plan are not meeting the readiness and sustainability needs—particularly the sustainability needs—of the military service.

Representatives of the unified combatant commanders testified that while readiness of their forces today is high, it is beginning to level off and head downward, while sustainability is already heading downward. General Wagner, the Commander of the Army Materiel Command, testified last Friday that "many of our management indicators are beginning to show early indications of problems that we had when we were regarded as a 'hollow' Army."

In this environment, it is essential that we carefully consider options for Reserve substitution and that we take a good hard look at our overseas deployments to see if we can't achieve some economies without sacrificing significant military capability. I think all of us realize that the real growth in defense spending forecast by the President for fiscal years 1991 through 1994 is very unlikely to become a reality in the absence of a much more comprehensive and far-reaching budget agreement between Congress and the President.

Mr. Chairman, the Subcommittee on Readiness, Sustainability, and Support has already raised some serious questions about the proposed relocation of the Air Force's 401st Tactical Fighter Wing to Italy. I look forward to the witnesses' testimony, and I will have questions for them after they have given their opening statements.

Senator LEVIN. Let us call on Robert Hale, Assistant Director for National Security and International Affairs at the Congressional Budget Office, accompanied today by Ms. Lane Pierrot, the Senior Analyst who conducted the study. Please proceed, Mr. Hale.

STATEMENT OF ROBERT F. HALE, ASSISTANT DIRCTOR FOR NATIONAL SECURITY, CONGRESSIONAL BUDGET OFFICE, WASHINGTON, DC; ACCOMPANIED BY LANE PIERROT, PRINCIPAL ANALYST, NATIONAL SECURITY DIVISION, CONGRESSIONAL BUDGET OFFICE, WASHINGTON, DC

Mr. HALE. Thank you. We both appreciate the opportunity to testify today on the costs and effects of transfers of Active Air Forces to the Reserves.

At your request we examined three options that would transfer between 125 and 305 aircraft from the Active Air Forces to the Reserves. We are not here either as advocates or opponents of those transfers, but rather to describe our analysis of their costs and effects, and let me turn to those. The Air Force would have to work out the details of these transfers, but to illustrate the possible transfers, we considered three options.

OPTION I

The first, as I said, would reduce Active aircraft in the Air Force by 125 and use those planes to increase the number of aircraft in 26 squadrons in the Air National Guard. Reserve squadrons frequently have fewer aircraft than their Active duty counterparts. So, rather than creating new Reserve squadrons, we assume that the aircraft transferred from the Active Forces are used to increase the size of Reserve squadrons. The approach is efficient. You do not have to have the overhead associated with new squadrons, and it is a technique the Pentagon calls "robusting."

Specifically, Option I would remove from the Active Forces one squadron of A-10 aircraft and three squadrons of F-16 aircraft. We assume the three F-16 squadrons are withdrawn from Europe. The option would also remove one squadron of KC-135 tankers and one of C-130 airlift aircraft. So, the option would affect three major Air Force missions—the general purpose forces mission and the tanker and the airlift mission—but we would not change the mix among missions, just transfer the aircraft from the Active Forces to the Reserves. If you want to see the details of the transfer I am talking about, it is on page 8 of my prepared statement.

To give you an idea of the effects of the transfer on the overall Active/Reserve mix, it would increase the percentage of Reserve aircraft from today's level of 33 percent to about 37 percent. Those percentages refer to the largest, the general purpose forces mission.

Now, how much would such a transfer save? When fully carried out, Option I would result in savings of about $180 million a year in operating and support costs. Those include personnel costs and day-to-day operation and maintenance costs. Reserve squadrons cost less because they fly fewer hours and make greater use of part-time personnel. Savings also occur under this Option I because of robusting. Entire squadrons and their overhead are eliminated from the Active Forces, but no new squadrons are added to the Guard. Details of these cost estimates are in the Tables A-1 and A-2 at the end of my prepared statement. We made the estimates of cost using an Air Force model called the Sable Cost Model.

Now, Option I would entail some added one-time costs, for moving units into the Guard and for building new facilities needed at some Guard bases. These one-time costs would be quickly repaid and would turn to net savings. Assuming that all the transfers were carried out by the end of 1990, net savings over the next 5 years would total about $830 million.

Senator LEVIN. Does that include the savings of the base at Crotone?

Mr. HALE. No, it does not. There are no base costs included in these numbers. Nor did we make explicit assumptions about which wing would be involved either in the States or in Europe.

Now, these savings are small as a fraction of the total defense budget, in part because we assume no changes in procurement. But because of the efficiencies inherent in this robusting, the savings under the option roughly equal the operating costs that would be saved by eliminating an entire Air Force wing and, in that context, the savings do seem significant.

In addition to altering costs, this transfer would affect military capability. Because Reserve units do not maintain proficiency or as much proficiency in multiple missions, they may be less capable than Active units. For example, some F-16 pilots in the Active Forces would practice attacking enemy aircraft both in the air and on the ground. They might also practice delivering tactical nuclear weapons. Because they fly less, F-16 pilots in the Reserves usually develop or maintain proficiency in fewer conventional missions, and no reservist currently practices delivering tactical nuclear weapons.

As has been noted in the opening statements, however, in the missions for which they do train, the Air Reserve Forces often demonstrate performance comparable to their Active counterparts. Indeed, in some cases, Reserve Forces have performed better in military exercises, largely because they have substantial experience, as I think you are well aware, in the Active Forces.

Moreover, transfers from the Active Forces to the Reserves offer a key advantage. They do not change the number of aircraft available to the United States when the planes would be needed most; that is, in the event of a major war.

In sum, the Reserves offer some pluses and some minuses on capability. Whatever one concludes about the relative capability—and it is contentious—the effects of this transfer under Option I should be modest because the transfer itself is modest. As I mentioned earlier, it would cause the Reserve share of the general purpose forces mission to rise from 33 percent today to 37 percent, an increase of about 12 percent.

Now, in addition to questions of capability, there is a question about effects of Reserve transfers on mobilization. Option I assumes that one Active air wing is withdrawn from Europe, and that means that in the event of a war occurring with little or no notice, the United States would have fewer aircraft available in Europe—about seven wings rather than the roughly eight wings that the United States has today.

There is also a concern that the Reserve Forces would not be called up quickly in the event of a major war. In a period of high tension, the President might be reluctant to step up wartime preparation by calling up the Reserve Forces. That may be a legitimate concern, but if so, it is already a problem. Today roughly half of the 60 fighter squadrons scheduled to be deployed to NATO within 10 days of a decision to mobilize for a major war would be Reserve squadrons, and this Option I would increase this dependence only modestly.

Finally, transfers to the Reserves could affect not only wartime capability and mobilization, but also peacetime management of the Reserves and Active Forces. The Reserves recruit heavily from the experienced personnel leaving the Active Forces. So, if carried too far, transfers from the Actives to the Reserves could leave the Reserves unable to man their own forces. Currently, however, modest Reserve Forces are not having difficulty recruiting experienced personnel, and it seems unlikely that the modest transfers envisioned under Option I would create any new problems.

Indeed, Option I would help solve one existing problem that Senator Glenn referred to. The Air Force argues that its Active Forces are currently short of experienced pilots, and they expect the shortfall to grow sharply over the next 5 years. Option I would require 218 fewer Active duty pilots, thus eliminating the current shortfall. The 1994 shortfall would, however, be reduced by only about 7 percent. While reducing the Active shortfall, there is no indication this transfer would cause a shortfall of pilots in the Reserves because the annual Reserve recruiting objectives would grow by only about 1 percent under this option.

Option I would also alter the time that Active duty personnel spend overseas, one of the major concerns of the Active Air Force with these transfers. Option I, which would withdraw a wing of F-16s from Europe, would actually decrease the proportion of F-16 aircraft deployed overseas while increasing it for others. If you would like to see the details, they are on table 3 of my prepared statement.

I have now discussed in some detail the advantages and disadvantages of Option I. Let me turn to the other two we looked at but in a good deal less detail.

OPTION II

In the second of the three options, we examined transfers of only slightly more aircraft, this time to both the Air National Guard and the Air Force Reserve. Basically the pros and cons and costs are similar to those under Option I; so I will not discuss Option II any further.

OPTION III

Let me turn, though, to the third and last of our options which illustrates a significantly larger transfer, this time taking 305 aircraft out of the Active Air Force and using them to increase squadron sizes in both the Air National Guard and the Air Force Reserve. This approach would exhaust most of the opportunities for robusting. Any further transfers would require creating new Reserve units or other changes.

Specifically, Option III would eliminate 14 Active squadrons and would assume the withdrawal from Europe of three F-16 squadrons and two F-111 squadrons. This transfer would allow 30 Guard squadrons and eight squadrons in the Air Force Reserve to be robusted with more aircraft. Again, if you would like you can see the details of Option III of my prepared statement.

Under this option, Reserve Forces would have about 44 percent of the general purpose forces mission compared to 33 percent today. If Option III were fully carried out, operating savings would average about $320 million a year. Additional construction costs would amount to about $100 million in 1990, but net savings over the next 5 years would still total about $1.4 billion.

The general advantages and disadvantages discussed in connection with the smaller transfer under Option I apply to the larger one as well, but the larger transfer of forces heightens concerns about possible adverse effects on military capability. These adverse effects include fewer pilots trained in multiple missions, slower mobilization times, and fewer forces available overseas if a war started with little or no notice.

As for peacetime management, Option III offers both pluses and minuses. For example, a large reduction in the size of the Active Air Force would heighten concerns about whether we would have enough experienced personnel to man the Reserves. On the other hand, Option III would reduce Active requirements for pilots by 450, more than eliminating the current shortfall and reducing the expected shortfall in 1994 by about 15 percent.

CONCLUSIONS

In sum, reviewing our analysis of all three options, one can reasonably conclude that transfers from Active to Reserve Forces would involve some loss of military capabilities primarily because the Reserves train less. The transfers could also increase the time required to mobilize to fight a war. On the other hand, the Air Reserves have a strong record of performance in the missions for which they train. Transfers to the Reserves could also help in solving some current problems of peacetime management such as a shortfall of Active duty pilots.

Moreover, transferring Active duty aircraft to the Reserves saves operating dollars. The savings we have discussed are small as a percentage of the total defense operating budget, and they entail no procurement savings. But, because of the efficiencies associated with robusting or increasing the size of Reserve squadrons, reductions in operating costs rival those achieved by eliminating entire aircraft squadrons from the Active Air Force.

Yet, in contrast to elimination, transfers to the Reserves would leave aircraft available to the United States when they are needed most—in the time of a major war. Thus, Congress may wish to consider some additional transfers of Active to Reserve Forces as it seeks ways to hold down U.S. defense spending while minimizing the adverse effects of reductions in military capability.

That concludes my oral statement, gentlemen. I and Ms. Pierrot would be glad to answer any questions.

[The prepared statement of Mr. Hale follows:]

Statement of
Robert F. Hale
Assistant Director
National Security Division
Congressional Budget Office

I appreciate the opportunity to testify today on the costs and effects of transferring portions of the active Air Force to the part-time reserve forces. The Congress has frequently considered such transfers because they offer cost savings without changing the numbers of forces available to the United States in the event of a major war.

My testimony examines three options that would transfer 125, 149, and 305 aircraft, respectively, from active to reserve forces. The largest of these options would reduce operating costs by $320 million a year. While these savings represent only a small fraction of the total defense budget, they roughly equal the operating savings that would be achieved by eliminating two Air Force wings. Thus, they compare favorably with the operating savings associated with major changes in the number of forces.

My statement first provides background on Air Force missions and current Administration plans for Air Force aircraft. I will then discuss in some detail the savings associated with the three transfer options, as well as their various advantages and disadvantages.

BACKGROUND

In time of war, the forces of the U.S. Air Force would perform a variety of missions, three of which would be affected by options I will soon discuss. The first mission--termed the general-purpose forces mission--involves attacks on enemy aircraft in the air and on enemy targets on the ground in all except strategic nuclear conflicts. The second--or tactical airlift mission--involves transporting troops and equipment within military theaters. The third--or tanker mission--requires providing fuel to combat aircraft while they are in flight.

Many different types of aircraft carry out these missions. The A-10 aircraft and the F-16 aircraft are among the general-purpose forces. The A-10 aircraft attacks ground targets near the area of combat. The F-16 aircraft attacks targets in the air and on the ground. The airlift mission uses aircraft such as C-130s. Still other Air Force planes--for example the KC-135 aircraft--carry out the tanker mission.

The majority of the aircraft performing these missions are in the active Air Force. Today, about two-thirds of the general-purpose forces are in the active Air Force, as are about three-quarters of the tankers and roughly two-fifths of the tactical airlift aircraft. Active aircraft are manned by personnel who are available fulltime in peacetime.

The remainder of the aircraft that perform these three missions are in the reserve forces, either the Air National Guard (ANG) or the Air Force Reserve (AFR). (I will use the term "reserve forces" to refer to both the ANG and AFR.) Reserve forces train regularly but only part time during peacetime. In time of conflict, the President can call them to active duty.

However, call-ups of more than 200,000 reserve personnel--or call-ups for periods longer than 180 days--require the approval of the Congress.

Aircraft in both the active forces and the reserves are organized into air wings. Air wings in the active forces of the general-purpose forces typically consist of 72 aircraft actually available for combat duty (called primary authorized aircraft or PAA). A wing usually contains three squadrons, each with 24 PAA aircraft. Additional aircraft are maintained outside wings and are either undergoing maintenance or are used for training. Tankers and airlifters are also organized into wings and squadrons, though they are smaller in size. Active tanker squadrons usually have 13 to 16 aircraft. An active airlift squadron typically contains 16 planes.
Wings and squadrons in the reserve forces frequently contain fewer aircraft than their active counterparts. About two-thirds of the general-purpose squadrons in the reserve forces contain 18 aircraft, rather than the 24 aircraft typically found in active squadrons. Similarly, many tanker and airlift squadrons have fewer aircraft than do active squadrons.

CURRENT ADMINISTRATION PLANS

The Administration currently plans to increase the number of reserve squadrons that contain fewer aircraft than do active squadrons. To provide some of the savings needed to meet fiscal year 1989 budget constraints, the Administration agreed to reduce the size of the Air Force from roughly 38 to 35 wing equivalents. Two of the wing equivalents are to be removed from the active forces; one is to come from reserve forces. The Administration plans to achieve the reduction in reserve forces not by eliminating an air wing, but rather by cutting the numbers of aircraft in each of eight reserve squadrons and by phasing one squadron out of the forces devoted to the general-purpose mission.

These small reserve squadrons are expensive. Because of overhead expenses, it costs the reserves 17 percent more to operate 72 aircraft in four squadrons of 18 aircraft than it would cost them to operate those same aircraft in three squadrons of 24 aircraft.

The same general cost relationships would also apply to the active forces. That is, it would cost the active Air Force more to operate the same number of aircraft in smaller squadrons than in larger squadrons. As I just noted, the Air Force has agreed to reduce by two the number of wing equivalents in the active forces, but it has not yet made clear how it will accomplish these reductions.[1] If they are accomplished by reducing the number of aircraft in squadrons, savings will be substantially less than if they are carried out by eliminating squadrons.

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[1] Reductions in active forces were initially to be made by deactivating the 401st Tactical Fighter Wing (TFW) at Torrejon Air Force Base in Spain and the 474th TFW at Nellis Air Force Base in Nevada. It now appears that the 401st TFW will be retained at a new base in Crotone, Italy. CBO was not able to ascertain how the Air Force plans to compensate for retaining the 401st TFW.

CBO'S CRITERIA FOR DESIGNING ALTERNATIVES

The Congressional Budget Office examined three alternatives that would cut active force levels and transfer the aircraft and their missions to the Air National Guard and, in two of the options, to the Air Force Reserve. These options would reverse current Administration plans to reduce the size of the reserve forces and instead would increase the reserve's size. The options range from one that would transfer about 125 aircraft into the ANG to one that would transfer 305 planes into the ANG and AFR.

The Air Force would have to resolve details of the transfers, including the specific units that would lose and receive aircraft. But all the options are designed to meet criteria that seem reasonable if such transfers are to be carried out. As I noted earlier, reserve aircraft squadrons often contain fewer aircraft than their active counterparts--an expensive practice. To increase efficiency and savings, instead of creating new squadrons, aircraft transferred from the active forces are always used to increase the number of aircraft in reserve squadrons--a practice the Pentagon terms "robusting." Conversely, aircraft are eliminated from the active forces by cutting out entire squadrons so as to pare overhead costs.

CBO also followed two other principles in designing its options. First, it left the distribution of aircraft by mission unchanged. In other words, if aircraft used in the airlift mission were eliminated from the active forces, then we increased airlift squadrons in the reserve forces by an equal number of aircraft. Also, the options assume that some of the forces eliminated from active duty would come from forces stationed overseas. Because the ratio of active forces based in the United States to those based overseas would not increase significantly, this adjustment would avoid large increases in the time that active-duty personnel would have to spend overseas.

OPTION I: TRANSFER 125 AIRCRAFT TO THE AIR NATIONAL GUARD

Option I reduces the active air force by 125 aircraft and uses most of them to increase the size of 26 squadrons in the Air National Guard (see Table 1). This option would leave the Guard larger than it is today, reversing current Administration plans to cut the size of the Guard by reducing the number of aircraft in some of its squadrons.

Specifically, Option I would remove from the active forces one squadron of A-10 aircraft and three squadrons (one wing) of F-16 aircraft. The option would also remove a squadron of KC-135 tanker aircraft and a squadron of C-130 airlift aircraft. Except for the three F-16 squadrons, all the squadrons to be removed are assumed to be forces now based in the continental United States. The three squadrons of F-16 aircraft are assumed to be based in Europe.

This option would use aircraft transferred from the active forces to increase the numbers of planes in 26 Guard squadrons--16 of them the general-purpose forces of the Air National Guard. This approach would

TABLE 1. DESCRIPTION OF OPTIONS

	Number of Aircraft (PAA)a/			Number of Active-Duty Squadrons			Number of Reserve Squadrons with Increased Numbers of Aircraft	
	Active b/	Air National Guard	Air Force Reserve	General Purpose Mission	Tanker Mission	Tactical Airlift Mission	Air National Guard	Air Force Reserve
Current Administration Plans c/	2,400	900	350	75	35	12	n.a.	n.a.
Changes Under:								
Option I	-125	124	0	-4	-1	-1	26	0
Option II	-149	112	36	-5	-1	-1	24	6
Option III	-305	256	48	-12	-1	-1	30	8

SOURCE: Congressional Budget Office estimates using Air Force data.

NOTE: n.a. = not applicable.

a. Numbers reflect only those types of aircraft affected by options.

b. One active-duty aircraft is assumed to be retired under all the options.

c. Numbers are for 1991 and reflect changes announced in the budget submitted in January 1989.

increase the reserve's share of the general-purpose mission by about 37 percent, compared with 33 percent under Administration plans (see Table 2).

Option I would also use aircraft transferred from the active forces to increase the size of 6 of the Guard's KC-135 tanker squadrons from 8 to 10 aircraft. Although the reserve's share of tanker aircraft rises only from 22 percent to 24 percent, this approach would increase the number of "alert" aircraft available to U.S. commanders. (Alert aircraft are fully manned and ready to perform their mission with minimal delay.) The Guard argues that adding two tankers per squadron would enable each ANG tanker squadron to keep an additional plane on alert, thus increasing the number of ANG alert aircraft by at least six. Since the deactivated squadron in the active forces would have only had three to four planes on alert, Option I results in an increase of two to three alert planes.

Finally, Option I increases the number of aircraft in four tactical airlift squadrons from 8 C-130 aircraft to 12 aircraft. The reserve share of the airlift mission would thus rise from planned levels of 62 percent to about 65 percent.

Savings

When fully carried out, this alternative would result in savings of about $180 million a year in operating and support costs (see Table 2).[2] Guard

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[2] All of the operating savings presented in this statement are estimated using an Air Force model--Systematic Approach to Better Long-range Estimation, or SABLE. This model is the only one available that provides estimates for options that involve adding aircraft to Guard squadrons. Moreover, SABLE (or its predecessor) has frequently been used by the Air Force to estimate costs of options similar to those in this statement. The SABLE model, however, does not produce the detail associated with the most accurate budget numbers. Nor do all the categories of costs in the SABLE model match similar categories in the annual budget submissions.

TABLE 2. EFFECTS OF OPTIONS ON COSTS AND SELECTED OTHER MEASURES

	Savings Relative to Administration Plans (In millions of current dollars)		Percentage of Forces in Reserves (General purpose mission)	Air Forces Stationed in Europe (In wing equivalents)	Percentage Reduction in 1994 for Pilot Shortfall a/
	Annual b/	Total 1990-1994 c/			
Current Administration Plans	n.a.	n.a.	33	8.3	n.a.
Option I	180	830	37	7.3	7
Option II	200	920	38	7.3	9
Option III	320	1,420	44	6.8	15

SOURCE: Congressional Budget Office estimates using Air Force data and models.

NOTE: n.a. = not applicable.

a. Change is relative to shortfall currently predicted by Air Force.

b. Annual savings are for 1991, by which time changes are assumed to be fully in effect.

c. Total savings (net of added costs of construction), assuming all changes are made by the end of 1990.

squadrons are cheaper because they fly fewer hours and make greater use of part-time personnel. Savings also occur under Option I because squadrons and their overhead are eliminated from the active forces, but no new squadrons are added in the Guard. This shift toward fewer squadrons allows the Guard squadrons to absorb the added aircraft with about 2,800 additional personnel (including about 2,090 part-time and about 250 full-time military personnel and about 460 civilians). At the same time, the active forces would lose about 4,210 personnel associated with the transferred squadrons (see Table A-1 in the backup material to my testimony).

This option would entail some one-time added costs for moving units into the Guard and for building new facilities needed at some Guard bases. According to the Guard, these costs would amount to about $20 million in 1990, including about $10 million that would have otherwise been spent in 1991 through 1994 but under this option would have to be expended in 1990 (see Table A-2). Assuming that all transfers are accomplished by the end of 1990, net savings over the five years would total about $830 million (see Table 2).

Savings under Option I are only a small fraction of the total defense budget. These small savings occur in part because CBO assumes no change in procurement costs. To minimize adverse effects on capability, we assume that Guard units receiving aircraft under this option will be provided with the same modern equipment that would have been given to the active units that are to be eliminated. Even the operating savings are modest because of the substantial costs associated with operating a Guard unit. An F-16 squadron in the Guard costs about 80 percent as much to operate as does a squadron of the same size in the active forces.

On the other hand, because of the efficiencies inherent in increasing the size of reserve squadrons, operating savings under Option I roughly equal the operating savings that would be achieved by eliminating three squadrons (an entire air wing) from the active forces. Eliminating three squadrons could eventually reduce procurement costs, thus adding substantially to savings. In terms of operating costs, however, the savings from Option I compare favorably with those that would be achieved by substantially reducing the number of forces.

Sensitivity of Savings

Savings could be less--and might even disappear altogether--if Option I were carried out in other ways. If, for example, the Air Force put this alternative into effect but avoided reducing the number of active-duty personnel--perhaps by arguing that these personnel are needed for other missions--then savings would be eliminated and the option would actually add to costs (see Table A-3). Savings would also be much lower if reducing the number of active aircraft were accomplished by cutting the number of aircraft in squadrons rather than by eliminating entire squadrons. Reducing the number of aircraft in active squadrons would leave unchanged many of the fixed costs that are part of the savings assumed in my testimony. Finally, the savings under

Option I would be lower if CBO had used a different assumption--namely, that the F-16 aircraft to be eliminated from the active forces were based in the continental United States rather than in Europe. European-based forces fly more and have higher operating costs.

On the other hand, changes in assumptions could produce savings for Option I that are higher than those in Table 2. For example, additional savings would result if the Air Force were able to close an overseas base by deactivating the F-16 wing based in Europe. The magnitude of these savings would vary widely depending on which base was closed. Costs might also be avoided if the KC-135 tanker aircraft transferred to the Guard received a less expensive modification of its engine. This less expensive modification is called the "E" version, and it has been performed on other Guard tankers in place of the more expensive modification (the "R" version) that active tankers are now receiving. "E" modifications cost only about 20 percent as much as "R" modifications, though they also provide less of an increase in capability.

Effects on Military Capability and Manning of Forces

At this point, I will discuss at some length the effects of Option I on manning of forces and on military capability. Because many of the same arguments apply to the other two options in my testimony, I will refer back to this discussion in later parts of my statement. On balance, the arguments I will present suggest that Option I would reduce military capability, but only by a modest amount.

Numbers of Forces. Transfers of forces from the active forces to the reserves do not change the number of aircraft available to the United States when they would be needed most--in the event of a major war preceded by mobilization of the reserves. This factor is one key advantage of such transfers.

Capability. On the other hand, because reserve units do not maintain proficiency in multiple missions, they may be less capable than active units. For example, some F-16 pilots in the active forces practice the tactics needed to carry out attacks against both enemy aircraft and ground targets. These same pilots may also practice the tactics needed to deliver shorter-range or tactical nuclear weapons. Because they fly less, F-16 pilots in the reserves usually develop or maintain proficiency in only one of these missions, and no reservists currently practice the delivery of tactical nuclear weapons.

The advantage offered by training active forces in multiple missions might, however, be limited because of the complexity of missions. This complexity could keep active pilots from becoming truly proficient in more than one mission. The Air Force may also not be able to afford enough munitions to enable each active aircraft to carry out multiple missions effectively.

Moreover, in the missions for which they do train, reserve forces often demonstrate performance comparable to their active counterparts. Indeed, in some cases, reserve forces have performed better in military exercises. Years of military experience account for this seeming anomaly. Reserve pilots typically have completed a number of years of active duty before joining the reserves and have flown substantially more hours than active pilots. Hence, they require fewer flying hours per month to maintain their proficiency. Reserve maintenance personnel also require less training since they, too, are usually more experienced than their active-duty counterparts.

Whatever one concludes about the relative capability of reserve and active air forces--and it is a contentious issue--the effects of Option I on overall capability should be modest if only because the shift in forces is modest. For the largest of the three missions involved in the transfer--general purpose forces--Option I would increase the portion of forces in the reserves from 33 percent to 37 percent, an increase of about 12 percent.

Speed of Mobilization. In addition to questions of capability, there is also the issue of whether Guard forces would be called up to go to war on short notice. The President--and in the case of large call-ups, the Congress--must act explicitly to call the reserves to active duty. In a period of high tension that would probably precede any major war, the President might be reluctant to step up wartime preparations by calling up reserve forces. Thus, in a major war, reserve forces might become available later--and perhaps significantly later--than forces maintained on active duty.

These problems, however, already exist. Roughly half of the 60 fighter squadrons scheduled to be deployed to NATO within 10 days of the decision to mobilize for a major war are reserve squadrons. Option I would increase dependence on the reserves by about 12 percent.

Forward Deployments. To avoid lengthening the time active-duty personnel spend overseas, Option I would eliminate one of the 8.3 wing equivalents of general-purpose aircraft that the United States currently has stationed in Europe (see Table 2). In the event of a surprise attack by the Warsaw Pact, or if NATO is slow to respond to warnings, such a reduction would leave NATO with fewer forces in place to fight a war. The implications of this reduction are difficult to quantify, but we do know capability would be reduced in the early days of a sudden war.

Moreover, carrying out this option could affect the timely transportation of military cargo back to Europe in the event of a major war. The aircraft I am discussing can fly to Europe on their own if they are accompanied by tanker aircraft to provide them fuel while in flight. But spare parts, test equipment, and other items critical to successful flight operations would have to be transported by cargo aircraft, which would probably be in short supply in the early days of a major war. Even under this option, items needed by tactical aircraft are likely to enjoy sufficiently high priority to guarantee their timely shipment. However, air transport of other critical military materiel--including items needed for the ground war--might be delayed.

Finally, some strategists would argue that the United States should not withdraw U.S. aircraft from Europe before negotiating an agreement with the Soviet Union to make offsetting reductions in its forces. The United States, however, has so far refused to consider reducing its aircraft as part of the conventional arms negotiations currently under way.

Effects on Recruiting. Transfers to the reserves could affect not only wartime capability but also the peacetime management of the active and reserve forces. For example, if carried out to a sufficient degree, transfers from the active forces to the reserves could harm the ability of the reserves to recruit. Typically, reserve personnel gain experience during a period of active duty and then leave to join the reserves. If the active forces are cut too much, the result might be a shortage of trained persons available to join the reserves. Currently, however, most reserve forces are not having difficulty recruiting experienced personnel, and it seems unlikely that the modest transfers carried out under Option I would create any new problems.

Moreover, Option I would help solve one existing problem. The Air Force argues that its active forces are currently short of about 200 experienced pilots. According to the Air Force, that shortage will grow to almost 3,000 pilots by 1994, largely as a result of increased hiring by commercial airlines. Option I would require 218 fewer active-duty pilots, thus eliminating the current shortfall of experienced pilots and reducing the 1994 shortfall by about 7 percent (see Table 2).

Nor is it likely that this transfer would cause a shortfall of pilots in the reserves. At present, the reserve forces are having no trouble recruiting and retaining experienced pilots. Because Option I reverses planned reductions in reserve forces, the option would only require that the reserves recruit an additional seven pilots a year--about 1 percent of the number currently recruited.

Time Spent Overseas. Transfers of active aircraft to reserve forces could increase the time active-duty personnel must spend overseas. The Air Force argues that it wants no more than about 40 percent of its aircraft stationed outside the continental United States. On average, such a limit would permit those Air Force active-duty personnel assigned to air units to spend no more than 40 percent of their careers overseas. While apparently little empirical evidence exists relating increased time overseas to low retention, this issue is still of concern to the active Air Force.

Because it assumes the withdrawal of a wing of F-16s from Europe, the share of F-16 aircraft deployed overseas would fall from 43 percent under current plans to 38 percent--an improvement that would allow this type of aircraft to meet the Air Force goals. On the other hand it would increase that fraction for some types of aircraft. For A-10 aircraft, for example, the proportion of aircraft based overseas would rise from its current 38 percent to a level of about 42 percent, above the Air Force's desired level of 40 percent (see Table 3).

In sum, Option I would increase reliance on the reserves by about 12 percent. Certain factors suggest such a transfer would reduce capability, by including less time for reserves to train in multiple missions, and raise concerns about timely mobilization in the event of war. But transfers to the reserves leave the military with the same numbers of forces when they are needed most--in a major war. Moreover, they offer other benefits, including a high level of experience, that suggest that reductions in capability would be modest.

TABLE 3. PERCENTAGES OF AIRCRAFT STATIONED OVERSEAS

	Type of Aircraft		
	A-10	F-16	F-111
Current Administration Plans	38	43	59
Option I.	42	38	59
Option II.	45	38	59
Option III.	45	45	53

SOURCE: Congressional Budget Office estimates using Air Force data.

OPTION II. TRANSFER 149 AIRCRAFT TO THE GUARD AND RESERVE

The second of CBO's three options is designed to illustrate the effects of transfers to both the Air National Guard and the Air Force Reserve. Under Option II, the active forces would lose seven squadrons and 149 aircraft--one more squadron of A-10 aircraft than they lost under Option I. Option II uses 36 of these aircraft to increase the size of 6 squadrons in the Air Force Reserve and 112 aircraft to increase the size of 24 squadrons in the Air National Guard.

Savings

Once Option II is fully carried out, operating savings would average about $200 million a year--slightly more than savings under Option I. After deleting added costs of military construction, net savings would amount to about $920 million over the next five years. The comments made in connection with Option I about the source of the savings, and the sensitivity of savings to differing assumptions, apply equally to this option.

Military Capability and Manning of Forces

In terms of military capability and manning of forces, Option II brings its advantages and disadvantages to another category of military force--the Air Force Reserve. In most other respects, arguments for and against this option are identical to those under Option I; at most, they change in degree. For example, Option II would reduce requirements for pilots by about 250, eliminating 9 percent of the expected 1994 shortfall, compared with Option I which eliminated 7 percent. Option II would increase the proportion of A-10 aircraft based in Europe to 45 percent, compared with 42 percent under Option I.

OPTION III: TRANSFER 305 AIRCRAFT TO THE GUARD AND RESERVE

Option III illustrates a significantly larger transfer, taking 305 aircraft out of the active Air Force and using them to increase squadron sizes in the Air National Guard and the Air Force Reserve. This approach would exhaust most opportunities for increasing the sizes of reserve squadrons. Any further transfers would require creating new reserve units or making a major shift in the nature of some units (for example, a transition from flying multiengine transport aircraft to flying jet fighter aircraft).

Specifically, Option III would eliminate 14 active squadrons. These would include eight F-16 squadrons (including three squadrons based in Europe), two A-10 squadrons, and two squadrons of the F-111 medium-range bomber (both based in Europe). Of the 305 aircraft transferred out of the active forces, 256 would be placed in the Air National Guard and 48 in the Air Force Reserve. This transfer would allow 30 Guard squadrons, and 8 squadrons in the Reserve, to receive a larger number of aircraft. Under this option, reserve forces would have about 44 percent of the mission of general-purpose forces, compared with 33 percent today.

Savings

If Option III were fully carried out, the operating savings would average about $320 million per year. Additional construction costs would total about $100 million in 1990, including about $20 million of funds that would otherwise have been spent in the 1991-1994 period, but under this option would have to be expended in 1990. Net savings over the next five years would total about $1.4 billion.

Manpower savings are an important contributor to these reductions in costs. Under Option III, the active forces would have about 10,000 fewer people (see Table A-1). The reserve forces would be larger by about 7,300 part-time personnel, 1,700 full-time civilians, and 700 full-time military personnel. These 700 military personnel would be active guard or reserve (AGR) personnel whose numbers are limited by the Congress. Thus, this option would require an increase in the ceiling on AGR personnel.

Capability and Force Manning

The general advantages and disadvantages discussed in connection with Option I apply to Option III as well. But the larger transfer of forces that would take place under this option heightens concern about some of the possible problems associated with transfers of active to reserve forces. Under Option III, the largest mission I have discussed in my testimony today--that is, general-purpose forces--would have 44 percent of its aircraft in the reserve forces compared with 33 percent today. Thus, to the extent that a shift toward more use of reserves involves reductions in capability, the concerns about this option are more important. Option III also reduces the number of wing equivalents deployed overseas from 8.3 to 6.8, raising concern about the ability of the Air Force to withstand an initial attack in a sudden war.

As for issues related to the peacetime management of the active and reserve forces, Option III offers pluses and minuses. Reducing the size of the Air Force heightens concern that too few experienced personnel would be available to man the reserves. Option III would also increase the portion of A-10 and F-16 aircraft in the active forces deployed overseas, thereby lengthening overseas tours for active-duty personnel. On the other hand, the option would decrease the proportion of F-111 aircraft deployed overseas. Moreover, it would reduce active requirements for pilots by 450 people, eliminating near-term shortfalls and reducing the expected shortfall in 1994 by about 15 percent.

CONCLUSION

In summary, the Administration currently plans to reduce the size of both the active and reserve portions of the Air Force over the next few years. The options I have discussed today would transfer active aircraft to the reserves. This shift would reverse the decline in the reserves, leading instead to larger reserve forces. The active portion of the Air Force would decline more than the Administration currently plans.

One can reasonably conclude that transfers from active to reserve forces would involve some loss of military capability since the reserves train less. The transfers could also increase the time required to mobilize to fight a major war. Some reserve transfers would also make it more difficult to manage the active forces in peacetime--for example, by increasing overseas tours.

On the other hand, the reserves have a strong record of performance in the missions for which they train. Nor would transfers of this sort represent a fundamental change in U.S. defense strategy. This country already depends on the air reserves for about one-third of its capability in missions accomplished by general-purpose forces. Transfers to the reserves could also help in solving some current problems of peacetime management. For example, transfers would reduce the shortfall of active-duty pilots.

Moreover, transferring active-duty aircraft to the reserves saves operating dollars. The savings I have discussed are small as a percentage of the total defense operating budget, and entail no procurement savings. However, because of efficiencies from increasing the size of reserve squadrons, reductions in operating costs from eliminating three squadrons of aircraft would be roughly equal to the reductions achieved by the smallest of the three options considered. Yet, aircraft transferred to the reserves would be available when they were most needed--in a major war. Thus, the Congress may wish to consider some additional transfer of active to reserve forces as it seeks ways to hold down U.S. defense spending while minimizing adverse effects on military capability.

APPENDIX TABLES

TABLE A-1. CHANGES IN NUMBERS OF PERSONNEL RELATIVE TO CURRENT ADMINISTRATION PLANS

	Full-Time Active-Duty Personnel			Full-Time Civilian Personnel	Part-Time Reserve		
	Officer	Enlisted	Total		Officer	Enlisted	Total
			Option I				
Active Duty	-400	-3,640	-4,030	-180	0	0	0
Air National Guard	70	190	250 a/	460	170	1,910	2,090
Air Force Reserve	0	0	0	0	0	0	0
Total	-330	-3,450	-3,780	280	170	1,910	2,090
			Option II				
Active Duty	-450	-4,240	-4,680	-200	0	0	0
Air National Guard	60	180	250 a/	420	170	1,790	1,960
Air Force Reserve	0	0	0	210	50	770	820
Total	-380	-4,060	-4,430	430	220	2,560	2,780
			Option III				
Active Duty	-850	-8,830	-9,680	-380	0	0	0
Air National Guard	120	610	720 a/	1,270	500	5,480	5,970
Air Force Reserve	0	0	0	420	90	1,190	1,280
Total	-730	-8,230	-8,960	1,310	590	6,670	7,250

SOURCE: Congressional Budget Office estimates using Air Force SABLE Model (with adjustments).

NOTE: Details may not add to totals because of rounding.

a. These figures represent active guard or reserve (AGR) personnel.

TABLE A-2. COSTS(+)/SAVINGS(-) RELATIVE TO CURRENT ADMINISTRATION PLANS (By fiscal years and in millions of current dollars)

	1990	1991	1992	1993	1994	Total 1990-1994
			Option I			
Active Duty	-140	-290	-300	-310	-320	-1,360
Air National Guard						
Operating	50	110	120	120	120	520
Military construction	20	a/	a/	a/	a/	10
Air Force Reserve	0	0	0	0	0	0
Total	-60	-180	-190	-200	-200	-830
			Option II			
Active Duty	-160	-330	-340	-350	-370	-1,550
Air National Guard						
Operating	50	100	110	110	110	480
Military construction	20	a/	a/	a/	a/	10
Air Force Reserve b/	10	30	30	30	30	130
Total	-70	-200	-210	-220	-230	-920
			Option III			
Active Duty	-320	-660	-690	-710	-740	-3,120
Air National Guard						
Operating	150	310	310	320	330	1,410
Military construction	100	-10	-10	-10	-10	80
Air Force Reserve b/	20	40	50	50	50	210
Total	-40	-320	-330	-350	-370	-1,420

SOURCE: Congressional Budget Office estimates using Air Force data and model.

NOTE: Details may not add to totals because of rounding.

a. Savings of less than $10 million.

b. The Air Force Reserve reported no need for added construction costs.

TABLE A-3. SENSITIVITY OF COSTS/SAVINGS (+/-) UNDER OPTION I TO CHANGES IN MANPOWER ASSUMPTIONS (By fiscal years and in millions of current dollars)

	1990	1991	1992	1993	1994	Total 1990-1994
Base Case (Assuming Reductions in Active-Duty Personnel)						
Active Duty	-140	-290	-300	-310	-320	-1,360
Air National Guard						
Operating	50	110	120	120	120	520
Military construction	20	a/	a/	a/	a/	10
Total	-60	-180	-190	-200	-200	-830
Base Case (Assuming No Reductions in Active-Duty Personnel)						
Active Duty	-50	-100	-110	-110	-120	-500
Air National Guard						
Operating	50	110	120	120	120	520
Military construction	20	a/	a/	a/	a/	10
Total	30	b/	b/	b/	b/	40

SOURCE: Congressional Budget Office estimates from Air Force SABLE model, with adjustments.

NOTES: All figures are rounded to the nearest $10 million.
Details may not add to totals because of rounding.

a. Savings of less than $10 million.

b. Costs of less than $10 million.

Senator Levin. Let us do something slightly different. Let us try to follow a 5-minute rule on this panel since we did not interrupt you. Your testimony was so coherent and quick that it was kind of hard to find a way to interrupt you.

COMPARISON OF OPTIONS

Option I would increase the percentage of planes in the Reserve and Guard from 33 to 37 percent?

Mr. Hale. It would increase the percentage in the general purpose forces mission from 33 to 37 percent.

Senator Levin. And what about Option III?

Mr. Hale. It would go from 33 to 44 percent.

Senator Levin. 44 percent?

Mr. Hale. Right.

Senator Levin. Okay.

Mr. Hale. There would be smaller increases in the other two missions we looked at, tankers and airlift, considerably smaller.

Senator Levin. Can you give us your assessment on the reduction in capability?

Mr. Hale. Well, we characterized it as likely to be modest. I cannot quantify the reduction, unfortunately, and there is no formula that validates the term modest either. But we did spend a lot of time listening to the pros and cons, and I think one ends up realizing that the Air Reserves have a lot of experience as they enter from the Active Forces. That led us to believe that the reduction in capability is likely to be modest, and these transfers, particularly the smaller one, are also fairly modest in size. The two factors combined to leave us thinking there would be some reduction, but it should not be large.

Senator Levin. Last week General Welch said that he felt that the Active/Reserve mix was just about right, but that there might be some minor opportunities for adjustment. Your highest option would transfer about 300 aircraft?

Mr. Hale. 305 aircraft, right.

Senator Levin. What is that as a percent of the aircraft operated by the Air Force?

Mr. Hale. If you look at it as a percentage of the total inventory of aircraft, not just the operating aircraft but including the pipeline and so forth, it is about 5 percent. It would be a little bit higher as a percentage of the operating aircraft, somewhere around 8 percent.

Senator Levin. Was that Option III?

Mr. Hale. That is Option III.

Senator Levin. Option I would be what?

Mr. Hale. About a third of that or 1½ to 2 percent of the inventory, 2 to 3 percent of the operating aircraft.

Senator Levin. All right. Now, if we selected, for instance, Option I, is it fair to conclude that we could, in effect, have a free wing of combat aircraft and that we would retain——

Mr. Hale. You leave out——

Senator Levin [continuing]. Combat aircraft, but we would avoid the costs of the Active air wing?

Mr. HALE. Yes, you leave out procurement costs. On the operating side, the savings that you get from Option I are roughly equal to the operating costs of an Active Air Force wing and in that sense, yes, you would get a free wing or enough money to operate a wing.

Senator LEVIN. Have you shared your three options and the figures therein with the Air Force?

Mr. HALE. Yes. I do not want to suggest that they have approved them, but we have comments from them as well as from the Guard and Reserve.

Senator LEVIN. The question that you posed to them, I presume, being that—not whether or not this would be recommended or desired—but whether or not these figures are accurate?

Mr. HALE. Right. I don't want to put words in their mouths, but I think the Active Air Force felt that we had, perhaps, overstated the savings. Among other things, they would argue that they would like to see, if we are going to go to more Reserves, a higher operating tempo than we now have, which would cut the savings. I believe it might be fair to say the Guard and Reserve felt we had understated some of the savings.

Senator LEVIN. I wonder why the difference there?

Mr. HALE. Well——

Senator LEVIN. We are going to try to stick to 5 minutes, so let me turn to Senator Wilson.

COST SAVINGS

Senator WILSON. Mr. Hale, these options are very interesting and when you are constrained to try and reduce costs and still avoid the so-called hollow Army or Air Force or Navy that we shrink from in memory of the 1970s, there is a great temptation to go to some of these. I take it, though, in your analysis you have not, as we will be constrained here this afternoon, applied those to a specific situation like the 401st?

Mr. HALE. No. The operating savings under Option I are a little larger than a wing and so do not apply directly to the 401st.

We did look, if it would be helpful, at the operating savings associated with simply bringing home one wing from Europe and spreading its aircraft around the Guard. That would be about $120 million. It would be a little bit less than Option I because it would be a little bit smaller.

What we did not do is look specifically at a single wing, in particular the 401st, and the one-time costs and savings associated with it.

Senator WILSON. Well, let me ask you this question because I think it is central to what we are going to be concerned with this afternoon as we focus on the 401st. Would there be any greater savings if we were to reduce a wing that is already here in the United States and if so, how much?

Mr. HALE. No. In terms of operating savings, it would probably be a little less because typically the European wings are slightly more expensive.

In addition, we have not, as Senator Levin asked, included in our estimates of savings any of the costs that would be avoided by not rebasing the 401st in Italy. That would amount to something on the order of $400-$500 million of U.S. money that will eventually, I understand, have to be spent to base the wing in Crotone. We have not included those dollars in estimates of savings, so I think actually you would save less if you eliminated an Active wing in the continental United States.

QUESTION OF CAPABILITY

Senator WILSON. All right. Well, that would seem to argue from a purely dollars and cents savings standpoint in favor of inactivation of the 401st or a foreign-based wing as opposed to one here in the continental United States.

On the other hand, to really compare apples and apples, would we not be constrained as well to measure the cost of having to redeploy either for training purposes or—we certainly at the minimum would have to consider the costs of redeployment in the instance where we were actually compelled to bring them back to the specific theater of operations some unit that we had brought home.

Mr. HALE. I think that is right. We are not suggesting that these options are equal in terms of capability to the current force. They would slow down mobilization time to an extent. You would have to transport planes and equipment back in the event of war. The planes themselves can self-deploy, assuming they can get tankers, but you would have to ship over spare parts, test equipment, and other materiel. If we did not add airlift capacity that would mean something else would have to go later. So, we are not suggesting that the options we are looking at here offer equal capability. What we are saying is that reductions in capability should be modest.

Senator WILSON. You have put your finger on one of the critical elements of that cost of redeployment, and I think again, at a minimum, we would be compelled to ask ourselves not only what is the cost, but what is our capability to engage in that kind of redeployment as it relates to moving those aircraft which are capable, as you say, of redeploying themselves in a real crunch and that is, what is our capability to engage in the aerial refueling, and that involves looking at our total force of KC-10s and what their other commitments are. I take it your analysis does not yet concern——

Mr. HALE. No, we do not. My guess is that if you really added airlift and tankers so as to leave capability unchanged, there would not be any savings. It might well add to costs. I think these options are most attractive if you are willing to accept a reduction in capability. I keep calling the reduction modest, but ultimately that has to be your judgment. If you want capability to be exactly as it is today, you may well be better off to leave the situation as it is today.

Senator WILSON. As I understand it, Mr. Chairman, we have a total force of about 60 KC-10s. To my knowledge, they all have a mission now. And I am advised to bring back from CONUS to the Mediterranean, whether to Crotone or to some other base, would involve at least a temporary commitment of about a quarter of the entire force. So, I think we are constrained to look at that.

My time has expired. Thanks very much, Mr. Hale.

Senator LEVIN. Senator Glenn.

ANALYSIS OF WING MOVE

Senator **Glenn**. Thank you. Just very briefly, I understand you did not run any cost analysis on the wing move, the 401st back here, correct?

Mr. **Hale**. Not explicitly. We did try to be prepared since we knew the issues would come up. The operating savings associated with bringing a wing back from Europe—the 401st, for example—and splitting up its aircraft among the Guard or Reserve would be on the order of $120 million a year. In addition, if it was the 401st, you would have some savings—avoided costs, really—associated with construction, probably on the order of $400–$500 million. That is our understanding. And there would probably be some other one-time costs and savings that we have not looked at.

Senator **Glenn**. As far as follow-on operating costs with families going back and forth and transfer costs and things like that, you did not really get into that kind of detail?

Mr. **Hale**. No. I presume if you bring them home, you would essentially reduce our commitments over there.

Senator **Glenn**. To keep them in place over there compared to that——

Mr. **Hale**. No, we did not analyze that. Some of those costs, however, may be implicit in the operating costs of the European wing; that is, the extra PCS.

Ms. **Pierrot**. We did not assume that the aircraft would remain in Europe. We assumed that they would return to the continental United States under this option. We did not, however, pay for the transportation costs of bringing them home. On the other hand, we did not credit the Milcon—military construction—cost savings.

Senator **Glenn**. No, I was thinking of operating costs on into the out-years ahead as you have the transfer of people back and forth.

Mr. **Hale**. I think the $120 million might reflect that.

Ms. **Pierrot**. But if you lift aircraft in Europe, you would still be sending people back and forth and savings would be lower.

Senator **Glenn**. Okay. On a broader context, Mr. Hale, when you look at the problem like this, do you have any documents as far as the total force policy and our commitments that give you any guidance as to what our purposes are in having certain units at certain places?

Mr. **Hale**. Our analysis was more focused on specific options. I have seen such documents from the Pentagon. They do seem to me fairly general, but I do not think it would be fair for me to say our analysis was hindered in any way by lack of those documents. We focused on very specific options.

Senator **Glenn**. In a specific case, that would be correct. You know, I have been pushing for some time to get somebody to take another look at our total force concept, how we are aligned, what our responsibilities are so we will know how we should be tailoring our military forces. And we are going to be pushing hard for that over the next few months and years. Thank you.

Senator **Levin** Thank you Senator. Senator Thurmond.

AIRLIFT CAPABILITY

Senator THURMOND. Thank you very much. Mr. Hale, in your approach you state that in the event we deploy the Reserve squadrons to Europe during a crisis, airlifts will be required to transport spare parts, test equipment, and other items critical to successful flight operations. You further indicate that because of this requirement, critical military materiel, including items needed for the ground war, might be delayed. I have two questions in this regard. First, do you know how much more airlift will be required based on your various options? And second, have you discussed the impact of this airlift requirement with anyone in the DOD and what was their reaction?

Mr. HALE. Well, to address the first one, I cannot quantify it for you, Senator. There would be a number of aircraft required to get all the test equipment and spare parts back to Europe. I suspect there are some witnesses following me who may be able to do a better job of quantifying the requirements.

As for your second question, there was some discussion with the Active Air Force when we presented our results, and they did express concerns about the need to transport materiel back to Europe.

As I said to Senator Wilson, I think that what we are doing in these options is essentially accepting some risk that we are going to be a little slower in deploying. It is probably not a matter of weeks but of days, and we may well be able to get all the airlift or all the things we need for the wings back, but it would delay other cargo of lesser priorities. So, I think these are not equal capability options. We are accepting some degradation in capability in return for some reduction in costs. If the context is one of constant defense budgets, the trade-off may not be appealing. If the context is a declining budget that demands that we make cuts, then these kinds of transfers may be more attractive.

Senator THURMOND. Mr. Hale, in considering the impact this transfer of squadrons will have on readiness, you stated that there will be a modest change in overall capability. Did you evaluate aircraft readiness in both Active and Reserve squadrons and was there any difference in terms of mission readiness?

Mr. HALE. I think we did the best we could, but qualitatively, Senator. There is no formula that tells us exactly the difference. I think the perception we have is that there is some less capability in the Reserve Forces, primarily because they do not train as much. They cannot have as much time to maintain capability, for example, in multiple missions. But, in the missions for which they train, they are quite good, and that led us to the conclusion that any reduction in military capability would be modest.

Senator THURMOND. Have you had a chance to talk to any of the personnel and how they would feel about this?

Mr. HALE. We did share these study results with the Active Air Force as well as with the Guard and Reserve, and I think predictably the Guard and Reserve were a good deal more positive toward the options than the Active Air Force. The Active Air Force is concerned with and emphasizes problems of the sort you have raised—for example, that mobilization could be slowed down. We may have trouble getting the equipment back to Europe if we bring our wings home. So, there is a clear division of opinion between the Actives and the Guard and Reserve.

Senator THURMOND. What is your recommendation straight out? Would you do it or not?

Mr. HALE. We can't make a recommendation, Senator Thurmond, since we are supposed to be a nonpartisan, neutral staff support agency, and we want to keep our jobs. I have tried to lay out the pros and cons for you. You will hear, I am sure, some people following me who will make clear recommendations.

Senator THURMOND. Thank you very much. Thank you, Mr. Chairman.

SQUADRONS ASSIGNED TO NATO

Senator LEVIN. Just one quick question. We now have 63 squadrons assigned to NATO of which 30 are Reserve squadrons, is that correct?

Mr. HALE. In the first 10 days of mobilization, that is about right.

Senator LEVIN. And this would increase the 30 of the 63 to 33 of 63, your Option I?

Ms. PIERROT. Yes, roughly.

Senator LEVIN. Okay. If there are no other questions, we will excuse this panel with thanks for your impartiality. You kept your jobs.

While the second panel is coming to take their seats, let me just indicate that Senator Dixon was, of course, hoping to be here. He has been very active in the thought processes that went behind this hearing, but he is floor managing a resolution this afternoon so he is committed on the floor of the Senate and probably cannot get here.

The second panel consists of Stephen Duncan, Assistant Secretary of Defense for Reserve Affairs, David J. Berteau, Deputy Assistant Secretary for Force Management and Personnel, John Woodworth, Deputy Assistant Secretary of Defense for European and NATO Policy, and Maj. Gen. C.G. Boyd, from the Directorate of Plans and the Deputy Chief of Staff, Office for Plans and Operations. Gentlemen, we appreciate your coming this afternoon. It is my understanding that Mr. Duncan is going to have an opening statement for the Department this afternoon.

Mr. DUNCAN. Yes, sir.

Senator LEVIN. All right, you may proceed.

STATEMENT OF STEPHEN M. DUNCAN, ASSISTANT SECRETARY OF DEFENSE FOR RESERVE AFFAIRS; ACCOMPANIED BY DAVID J. BERTEAU, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR FORCE MANAGEMENT AND PERSONNEL; JOHN A. WOODWORTH, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR EUROPEAN AND NATO POLICY; AND MAJ. GEN. CHARLES G. BOYD, U.S. AIR FORCE, REPRESENTATIVE OF THE DIRECTOR OF THE JOINT STAFF, DEPUTY CHIEF OF STAFF, OFFICE FOR PLANS AND OPERATIONS

Mr. DUNCAN. Thank you, Mr. Chairman. We appreciate the opportunity to appear today. I thought it might be helpful for us to get right to the questioning, so we have submitted a statement that is a single statement for all of us, instead of individual statements. Since we represent three OSD offices, we are anxious to respond to your questions.

We have asked Major General Boyd, a representative of the Joint Staff, to join the panel. The Chiefs of the Air Guard and the Air Force Reserve will join me on panel number 3, and I might note parenthetically that the statement which I will make here is that of the Office of the Secretary of Defense. I have listed General Boyd on the cover so you will have his full name and know exactly who he is.

As you know, a great deal of recent public debate has taken place on the general subject of the balance between Active and Reserve Forces in all of the services. As that debate progresses within the Government, we believe it is important to avoid broad generalities and to focus the discussion on specific missions and the capability of specific units and forces, whether those units are Active or Reserve units, to perform particular missions.

This approach is the approach which we have followed in the Department of Defense through the planning, programming, and budgeting process. The Secretary of Defense's Defense Guidance includes specific sections on Total Force manpower policy and force readiness and sustainability. The Department's Program Budget and Execution Reviews, one of which was just completed, all provide forums for the analysis of issues affecting both the Active and the Reserve Forces.

During the last year, for example, the Defense Resources Board has considered a wide range of issues involving the mobilization training base, Army combat and combat service support structure, Reserve military construction, Reserve component manning, medical manpower, Navy ASW forces, and numerous Air Force Active to Reserve transfer issues.

At any given time the Department of Defense is engaged in a number of studies examining the military capabilities of alternative force structures. The Conference Report on the National Defense Authorization Act for Fiscal Year 1989 of course, as Senator Glenn noted, specifically directed the Secretary of Defense to evaluate critically the capability and the desirability of realigning portions of the Air Force flying missions to the Air National Guard and the Air Force Reserve. It was proposed that such a realignment might have the potential of averting some of the aviator manning problems in the Active Force and might prove cost-effective in the long term. As Senator Glenn further noted, on February 16, then-Deputy Secretary Taft informed the Senate and House Armed Services Committees that the submission of that report would be delayed until the new Secretary of Defense had assumed office and the amended budget review was completed. Both of these events have now taken place, and the report should be completed and forwarded to Congress if not later this week, then shortly thereafter.

The purposes of the Total Force Policy of the Department of Defense is, of course, to achieve a fully integrated total force of Active and Reserve components which work together to carry out national security objectives.

As the policy has developed since the mid-1970s, National Guard and Reserve Forces have assumed significantly expanded peacetime operational responsibilities and greater wartime missions. Since 1980 the strength of the Ready Reserve Forces—that is, the Selected Reserve plus the Individual Ready Reserve—has increased by more than 300,000 personnel. Substantial amounts of new equipment have also been purchased for the Reserve Forces or redistributed to the Reserve Forces from the Active components. The Reserve Forces are currently being relied upon to an extent unprecendented in the peacetime history of the Nation.

I think we must honestly say, however, that Reserve Forces face significant challenges due in great part to the rapidity with which changes in the implementation of the Total Force Policy have taken place in recent years, insufficient resourcing, and the fact that reservists are part-time soldiers, sailors, airmen, and marines. Those challenges make questions of proper force mix more complex than they would appear at first glance.

Whether a particular mission should be assigned to Active Forces or to Reserve Forces depends upon the nature of the mission and the specific units to which the mission would be assigned. Any analysis of Active/Reserve Force mix must inevitably address a wide variety of factors such as the comparative cost of Active/Reserve Forces, the availability of sufficient modern equipment appropriate to the mission, the availability of sufficient numbers of personnel who are fully trained in the particular military skills required for that particular mission, whether there is an adequate CONUS sustaining base to assure equitable overseas tours for Active Forces, whether the mission under consideration requires forward-based forces, Alliance commitments, the urgency with which a particular mission must be performed, and the likelihood of its occurring in contingency situations short of mobilization, the effects of a particular change in force mix on recruiting, retention, the initial cost of converting from Active to Reserve units, and other similar factors.

In many cases, particular Reserve units can be assigned much greater responsibilities, or particular missions can be shifted from an Active component to a Reserve component. Some Reserve units, however, are incapable of assuming greater responsibility, and some missions are simply inappropriate for Reserve Forces. The goal is obviously to obtain a force mix balance which produces the required level of capability at the least possible cost and which gives the President and the Secretary of Defense maximum flexibility to meet national security objectives.

In the fiscal years 1990–1994 Program Adjustment which we just completed, Secretary Cheney ordered a shift of 24 FF–1052 class frigates to the Naval Reserve Force by fiscal year 1993, a restructuring of the Navy air anti-submarine warfare assets, including those in the Reserve Forces, and a study to develop alternative, innovative Reserve manning policies to facilitate the transfer of surface ships to the Naval Reserve Force. The current program also includes the transfer of aerial refueling aircraft to Air Force Reserve components. The Army will deactivate one brigade of the Fourth Infantry Division in fiscal year 1990, replacing that capability with an existing "roundout" Reserve component brigade. Several other force mix options were considered recently, but rejected for the time being. Some of those options may be considered again in the future after the President's National Strategy Review has been completed.

Among the many other relevant factors, the Department does consider ways in which Reserve units could be substituted for forward deployed Active units. Forward deployment has been a keystone of U.S. military strategy during the post-World War II era and, as you know, forward basing is an essential element of our national security strategy. In the case of Europe, for example, forward deployed force demonstrates the continuing commitment of the United States to the defense of our allies. It makes clear the strong coupling between the United States and NATO, and it enhances Alliance cohesion and solidarity. Changes in forward deployments anywhere must be carefully considered. Such issues are being currently addressed and considered in the President's comprehensive National Strategy Review. While there may be future opportunities to modify our present deployment strategy, it is important that we not act precipitously or allow budget pressures to force unilateral changes in our deployments that would affect our security interests adversely. If decisions are made in the future to alter our overseas presence in a particular area, it will then be appropriate to consider additional force mix changes.

Over the last 35 years, the force structure of the Armed Forces generally and the Active/Reserve mix in the Air Force in particular have changed significantly. The total number of aircraft in the flying program has decreased by 65 percent since 1956; that is, from 25,724 to 9,092 which are planned for fiscal year 1990. Total flying hours have decreased by 63 percent from 9 million in 1956 to 3.3 million in 1990. In spite of these decreases in aircraft and flying hours, the operations and maintenance budget which support the flying hours, the program has stayed about the same in constant dollars; that is $21.9 billion in 1956 and $26.3 billion in 1990. While the number of aircraft and Reserve units has increased from about 12 percent in 1956 to about 25 percent in 1990, the Reserve component share of the total Air Force O&M budget and cost is about 12 percent. Thus, as a general proposition, flying units are less expensive on Reserve status than in the Active Forces.

If the question of whether or not the Air National Guard and the Air Force Reserve could operate additional tactical aircraft in existing squadrons at minimal additional cost and maintain high readiness could be treated in isolation, we believe the answer would be "yes." Many existing National Guard and Reserve squadrons which were originally structured at 24 PAA for fighter attack and 12 for tactical airlift, are now assigned fewer aircraft. The manning and the maintenance of additional aircraft are clearly within the capability of the Air Force Reserve components with little increase in overhead structure.

In conclusion, the force mix and the force structure decisionmaking process within the Department is a continuing iterative one that constantly seeks the proper balance between relevant military, domestic, and international factors. We believe that the Department's planning, programming, and budgeting system is an effective management system to address these complex issues, but we will say very candidly that we are currently exploring ways to improve the coordination and the management of those issues within the Department of Defense. The program review which will be conducted as part of the next cycle of the programming, planning, and budgeting process will address the force mix issues in light of transfer actions which are already underway and the infrastructure changes which will result from the current round of base closings.

We can assure you, Mr. Chairman, that we will continue to examine carefully the potential for future transfers of Air Force missions to the Air National Guard and the Air Force Reserve. As I stated earlier, however, in determining the optimum Active/Reserve Force mix, we must constantly balance potential budgetary savings against all other relevant factors, particularly ensuring required military capability.

Mr. Chairman, this concludes our statement, and we would be happy, of course, to respond to your questions.

[The prepared statement of Mr. Duncan follows:]

PREPARED JOINT STATEMENT OF

HONORABLE STEPHEN M. DUNCAN, THE ASSISTANT SECRETARY OF DEFENSE FOR RESERVE AFFAIRS

MR. JOHN A. WOODWORTH, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR EUROPEAN AND NATO POLICY

MR. DAVID J. BERTEAU, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR FORCE MANAGEMENT AND PERSONNEL

MAJOR GENERAL CHARLES G. BOYD USAF, REPRESENTATIVE OF THE DIRECTOR OF THE JOINT STAFF

Good afternoon Mr. Chairman and members of the Subcommittees. We appreciate the opportunity today to discuss the subject of the balance and mix between Active and Reserve manning for Air Force flying units. Since we are somewhat uncertain about the precise nature of your questions, and because we are anxious to respond to them, the Department is represented today by officials from the Offices of Reserve Affairs, Force Management and Personnel and International Security Policy. We have also asked Major General Boyd, a representative of the Joint Staff, to join this panel. The chiefs of the Air National Guard and the Air Force Reserve will join me on the next panel.

As you know, a great deal of recent public debate has taken place on the general subject of the balance between Active and Reserve forces in all of the Services. As that debate progresses within the Government, it is important to avoid broad generalities and to focus the discussion on specific missions and the capability of specific units and forces, whether Active units or Reserve units, to perform particular missions. This approach is the approach which is followed by the Department of Defense in the planning, programming, and budgeting process. The Secretary of Defense's Defense Guidance includes specific sections on Total Force manpower policy and force readiness and sustainability.

The Department's Program, Budget, and Execution Reviews all provide forums for the analysis of issues affecting both the Active and the Reserve forces. During the last year, for example, the Defense Resources Board has considered a wide range of issues involving the mobilization training base, Army combat and combat service support structure, Reserve military construction, Reserve component manning, medical manpower, Navy anti-submarine warfare forces, and numerous Air Force Active-to-Reserve transfer issues.

At any given time, the Department of Defense is engaged in a number of studies examining the military capabilities of alternative force structures. The Conference Report on the National Defense Authorization Act for FY 1989 specifically directed the Secretary of Defense to evaluate critically the capability and desirability of realigning portions of the Air Force flying missions to the Air National Guard and the Air Force Reserve. It was proposed that such a realignment might have the potential of averting some of the aviator manning problems in the Active force and might prove cost effective in the long term. On February 16, 1989, then-Deputy Secretary of Defense Taft informed both the Senate and the House Armed Services Committees that the submission of that report would be delayed until the new Secretary of Defense assumed office and the amended budget review was completed. Both events have now taken place and the report should be completed and forwarded to the Congress later this week or shortly thereafter.

The purpose of the Total Force Policy of the Department of Defense is, of course, to achieve a fully integrated Total Force of Active and Reserve components which work together to carry out national security objectives. As the policy has developed since the mid-1970s, National Guard and Reserve forces have assumed significantly expanded peacetime operational responsibilities, and greater wartime missions. Since 1980, the strength of the Ready Reserve forces (Selected Reserve and Individual Ready Reserve) has increased by more than 300,000 personnel. Substantial amounts of new equipment have also been purchased for the Reserve forces or redistributed to the Reserve forces from the Active components. Reserve forces are currently being relied upon to an extent unprecedented in the peacetime history of the nation.

Reserve forces do, however, face significant challenges due in great part to the rapidity with which changes in the implementation of the Total Force Policy have taken place in recent years, insufficient resourcing, and the fact that Reservists are part-time soldiers, sailors, airmen and marines. Those challenges make questions of proper force mix more complex than they appear at first glance.

Whether a particular mission should be assigned to Active forces or to Reserve forces depends upon the nature of the mission and the specific units to which the mission would be assigned. Any analysis of Active/Reserve force mix must inevitably address a wide variety of factors, such as: the comparative cost of Active/Reserve forces; the availability of sufficient modern equipment appropriate to the mission; the availability of sufficient numbers of personnel who are fully trained in the particular military skills required for the mission; whether there is an adequate CONUS sustaining base to ensure equitable overseas tours for Active forces; whether the mission under consideration requires forward-based forces; alliance commitments; the urgency with which the particular mission must be performed and the likelihood of its occurring in contingency situations short of mobilization; the effects of a particular change in force mix on recruiting and retention; the initial costs of converting from Active to Reserve units; and other, similar factors.

In many cases, particular Reserve units can be assigned much greater responsibilities or particular missions can be shifted from an Active component to a Reserve component. Some Reserve units, however, are incapable of assuming greater responsibility and some missions are inappropriate for Reserve forces. The goal is obviously to obtain a force mix balance which produces the required level of capability at the least possible cost and which gives the President and the Secretary of Defense maximum flexibility to meet national security objectives.

In the FY 1990-94 Program Adjustment which was just completed, Secretary Cheney ordered a shift of 24 (FF-1052 class) frigates to the Naval Reserve Force by FY 1993, a restructuring of Naval air anti-submarine war assets -- including those in the Reserve forces -- and a study to develop "alternative, innovative Reserve manning policies" to facilitate the transfer of the surface ships to the Naval Reserve Force. The current program also includes the transfer of aerial refueling aircraft to the Air Force Reserve components. The Army will deactivate one brigade of the Fourth Infantry Division in FY 1990, replacing that capability with an existing "roundout" Reserve component brigade. Several other force mix options were considered, but rejected for the time being. Some of those options may be considered again in the future after the President's national strategy review is completed.

Among the many other relevant factors, the Department does consider ways in which Reserve units could be substituted for forward-deployed Active units. Forward-deployment has been a keystone of U.S. military strategy during the post-World War II era and, as you know, forward-basing is an essential element of our national security strategy. In the case of Europe, for example, forward deployed force demonstrates the continuing commitment of the United States to the defense of our allies, it makes clear the strong coupling between the United States and NATO, and it enhances Alliance cohesion and solidarity. Changes in forward deployments anywhere must be carefully considered. Such issues are currently being addressed in the President's comprehensive national strategy review. While there may be future opportunities to modify our present deployment strategy, it is important that we not act precipitously or allow budget pressures to force unilateral changes in our deployments that would affect our security interests adversely. If decisions are made in the future to alter our overseas presence in a particular area, it will then be appropriate to consider additional force mix changes.

Over the last 35 years, the force structure of the Armed Forces generally, and the Active/Reserve mix in the Air Force have changed significantly. The total number of aircraft in the flying program has decreased by 65 percent since 1956 -- from 25,724 to 9,092 (planned for 1990). Total flying hours have decreased by 63 percent, from 9 million in 1956 to 3.3 million in 1990. In spite of these decreases in aircraft and flying hours, the operations and maintenance budget, which supports the flying hour, the program has stayed about the same in constant dollars -- $21.9 billion in 1956, and $26.3 billion in 1990. While the number of aircraft in Reserve units has increased from about 12 percent in 1956 to about 25 percent in 1990, the Reserve component share of the total Air Force operations and maintenance costs is about 12 percent. Thus, as a general proposition, flying units are less expensive in Reserve status than in the Active forces.

If the question of whether or not the Air National Guard and the Air Force Reserve could operate additional tactical aircraft in existing squadrons at minimal additional costs and maintain high readiness could be treated in isolation, the answer would be "Yes." Many existing National Guard and Reserve squadrons which were originally structured at 24 PAA for fighter attack and 12 for tactical airlift, are now assigned fewer aircraft. The manning and the maintenance of additional aircraft are clearly within the capability of the Air Force Reserve components with little increase in overhead structure.

CONCLUSION

The force mix/force structure decision-making process is a continuing, iterative one that constantly seeks the proper balance between relevant military, domestic, and international factors. We believe that the Department's planning, programming, and budgeting system is an effective management system to address these complex issues, but we are currently exploring ways to improve the coordination and management of those issues within the Department. The program review which will be conducted as part of the next cycle of the planning, programming, and budgeting process will address the force mix issue in light of transfer actions which are already underway and the infrastructure changes which will result from the current round of base closings.

We assure you that we will continue to examine carefully the potential for future transfers of Air Force missions to the Air National Guard and the Air Force Reserve. As I stated earlier, however, in determining the optimum Active/ Reserve force mix, we must constantly balance potential budgetary savings against all other relevant factors, particularly ensuring required military capability.

This concludes our statement, Mr. Chairman. We will be happy to respond to your questions.

Senator LEVIN. Thank you, Mr. Duncan. We will follow a 10-minute rule now.

FLYING UNIT COSTS

On page 6 of your testimony you indicate that as a general proposition, flying units are less expensive in Reserve status than in Active Forces. Mr. Hale's testimony indicated that we could save somewhere between $800 million and $1.4 billion, depending on which of the three options he outlined we follow. We would retain all of the combat aircraft, but operate them in Reserve units. I understand, Mr. Duncan, that you received an advanced briefing from the CBO of the results of their analysis. Do you agree with the amounts that he thought would be saved from such a transfer?

Mr. DUNCAN. Sir, apparently the Air Force was briefed orally sometime in March on that issue. Frankly, we neither heard about it nor did we learn about it until last week. The CBO was kind enough to come over and talk to us about it. I cannot react to that study. We have not had a chance to react to it. The numbers on the order of magnitude are vaguely reasonable, but I certainly would not corroborate it. We just have not had a chance really to respond to it. We barely have heard about it, and today is the first time I have seen anything in writing.

Senator LEVIN. Would you give us a response for the record as to whether you think those savings are about right?

Mr. DUNCAN. Yes, sir, of course.

[See page 136 for answers.]

Senator LEVIN. Do you have any reason to believe from what you have seen that they are way off the mark or you just do not want to comment on it?

Mr. DUNCAN. We really have not had a chance to respond to it. I mean, it was a 20-minute briefing with us having an opportunity to ask a few questions. We simply have not had a chance to react since then.

EXCESS CAPACITY

Senator LEVIN. There have been articles written about excess capacity at our Air Force bases, and one of the drafts in response to the section 611 requirement has said that there was substantial excess capability at our Air Force bases. Do you agree with that?

Mr. DUNCAN. Well, let us just say that some of our bases——

Senator LEVIN. Is there excess capacity?

Mr. DUNCAN. There is a vigorous debate within the Department. And we are still debating, but we hope to conclude that debate in the very near future, and we will speak with one voice.

Senator LEVIN. How near future is it?

Mr. DUNCAN. We frankly thought we had a chance to bring the report over today. We did not, but by the end of the week or next week or at least in the very near future we hope to have it ready for you.

ROBUSTING OF SQUADRONS

Senator LEVIN. Fair enough. According to the CBO, about two-thirds of the general purpose squadrons in the Reserve Forces contain 18 aircraft rather than the 24-aircraft squadrons typically found in Active squadrons. Is there any reason why Reserve squadrons cannot operate 24 aircraft?

Mr. DUNCAN. I would respectfully suggest, Senator, that we ask the Air Force Reserve component chiefs when they testify on panel 3, but off the top of my head, I would say that there is nothing that per se would prevent the robusting of the squadrons to larger numbers of aircraft. There are other factors that go into those decisions, but as a general proposition, there is no principle that I am aware of that says they can never be robusted up to a higher number of aircraft per squadron.

Senator LEVIN. If we did go from 18 up to 24 aircraft squadrons in the Reserves, do you think that that would save us some money by dividing our overhead costs among more aircraft?

Mr. DUNCAN. I do not want to be evasive, but when we start talking about savings of money as we do in the DRB, there are several factors that go into the robusting concept other than the obvious cost savings that appear. And I am not really prepared to say just how much the order of magnitude would be. As a general proposition, we believe that there are some cost savings associated with transfers to Reserve component forces, but there are a lot more factors that go into that kind of decision than pure cost considerations, and there is lots of disagreement even when we use the same costing methodology about assumptions that are made when we go to the amounts of savings.

ACTIVE/RESERVE FORCE MIX

Senator LEVIN. Talking about savings, on February 16 Deputy Secretary Taft wrote the committee that the DOD could not respond to section 611 at that time because, "the budgetary growth assumptions upon which the budget was constructed are no longer valid, and we must now undertake a fresh look at our force mix. We have now received an amended budget submission and some $10 billion was cut out this year, some $65 billion will have to be cut over the next 5 years." A question of you, Mr. Duncan, is how can $65 billion be cut out of the budget with no change in the Active/Reserve Force mix in the Air Force?

Mr. DUNCAN. Well, I think as a general proposition, Secretary Cheney did review many, many force mix decisions. He personally chaired the DRB as we went through that process. Several options were presented for various types of missions involving various services, not just the Air Force. He was personally involved in that process and reached conclusions. So, to the extent that we now have an amended budget, I think it fairly represents and accurately represents his views on the proper force mix, at least for the time being, understanding that the President's National Strategy Review is still underway and we do not even have the results of that yet. But, for the time being, this certainly represents Secretary Cheney's views.

Senator LEVIN. Is it possible that that strategy review could affect the position of the administration on the Active/Reserve mix issue?

Mr. **Duncan**. It is possible. I have been involved in the presentation of several drafts of that report, but not all of it, Senator, so I am not prepared to say how it is going to turn out, but certainly we were going to look very seriously at such issues as we go into the next Execution Review which will probably start next month.

Senator **Levin**. Is it true that the Air Force maintains a one third/two thirds rule of thumb, that the Reserves will not exceed one-third?

Mr. **Duncan**. I would not want to presume personally to speak for the Air Force, but that seems to be an operating rule that we keep hearing.

Senator **Levin**. How could we sustain or justify an arbitrary rule of thumb when you indicate that the Active/Reserve mix is based on a detailed review of military requirements, capabilities, costs, and effectiveness?

Mr. **Duncan**. I am reluctant to speak for the Air Force. Perhaps one of our Reserve chiefs can talk about that, but as a general proposition, my personal starting point is that every mission and every assumption relating to force mix issues must be held up to the light of day and looked at on a continuous basis. We do that including——

Mr. **Berteau**. May I speak?

Senator **Levin**. Mr. Berteau.

Mr. **Berteau**. If I might add to that, sir, if you look at the Active/Reserve mix within the Air Force or any other service in terms of the mission-specific areas, you will see that, in fact, the pattern runs from a high percentage in the Guard and Reserve for some missions to a very small percentage in others. As we are reviewing those options and laying out the pros and cons of them we certainly do not adhere to any principle that says a certain percentage should be in the Guard or in the Reserve.

We look at the costs, we look at the capability, we look at the ability to respond and to execute and complete the mission and in those cases where, in fact, the preservation of capability is sufficient and there are significant cost savings, that is where we tend to move things into the Reserves. But if you look at the distribution by mission area, you will see that there is certainly no pattern or rule that is being followed within the Air Force or any other service.

Senator **Levin**. You have never heard of that rule of thumb?

Mr. **Berteau**. I have seen it reflected in popular literature, but I am not aware of it as an operating rule within either the Air Force or DOD decisionmaking.

Senator **Levin**. Even a guideline?

Mr. **Berteau**. Certainly not a DOD guideline.

LOCATION OF 401ST TFW

Senator **Levin**. Mr. Woodworth, let me ask you a question about the 401st. Is it correct that the Crotone location like Torrejon is just a peacetime operating location and that upon mobilization, the 401st would have to relocate to other bases?

Mr. **Woodworth**. That is correct, Senator.

Senator LEVIN. Would the return of 72 U.S. aircraft representing the small percentage that it does of the aircraft that we have committed to NATO seriously undermine our relations? Could we not quickly return those aircraft, for instance, in an emergency like the other 50 percent of the aircraft assigned to NATO that are in the Reserves?

Mr. WOODWORTH. I understand, Senator, the intent of the question, and it is an important one. I wonder if I could answer it in this way, by very briefly reviewing what was done with respect to the 401st. I think it does bear a brief repetition.

The decisions that were taken on the 401st last year were not, of course, taken lightly, and quite obviously they were not taken simply in light of cost factors. Indeed, I would say that cost factors as such were not the driving consideration. Let me add the fact that the decisions taken on the 401st were not taken quickly. They were taken over a period of a year, actually, beginning in early 1988 when, following the decision to remove the 401st from Torrejon, this issue was presented to NATO.

NATO addressed that question over a period of months until in May 1988 the Defense Ministers decided that NATO would support the relocation of the 401st in Europe and invited Italy to host it. I make this point because during that period of time a lot of study and a lot of diplomacy went into what to do with the 401st since it raised very fundamental questions about the presence of the United States, about forward deployments, about the kind of force structure that NATO wanted to maintain, and especially about what kind of force structure NATO wanted to maintain in the southern region.

That decision process continued through the rest of the year and at the end of the year, in the final Defense Planning Committee meeting of NATO, the Defense Ministers at that point decided that they would support the cost of relocating the 401st from the infrastructure fund, and they agreed to increase the fund sufficiently to meet that cost.

BURDENSHARING

Now, as a part of all of this throughout the period, and in relation to cost, was the underlying issue of burdensharing. Indeed, in addition to the strategic, political, and broader Alliance objectives that led to the decision to support the relocation of the 401st, there also existed Alliance awareness of strong sentiment in this country and in Congress for a visible and concrete demonstration by the Alliance of something that they understood to be and we understood to be in this country to be an important expression of burdensharing. Therefore, the decision was taken in this light as well.

I emphasize the process involved to underscore the fact that none of this that happened last year was taken lightly, including by the particular government concerned, including Italy, which of course, made the decision to host the wing. These decisions were taken at the highest level in these governments, in Italy as well, and indeed in the parliaments concerned in every country by virtue of the fact that the parliaments had to support the funding.

So, the decision was taken with great deliberation. I think it reflects, therefore, if nothing else, a sentiment—and, indeed, I would assume a strong belief by the members of the Alliance—that the retention of the wing in Europe in the southern region was important to the allies and to Alliance security.

Senator LEVIN. Thank you. Senator Wilson.

Senator WILSON. Thank you, Mr. Chairman. Mr. Woodworth, thank you for that full response to the Chairman's question. That was one that I had as well.

STRENGTH IN NATO

Let me ask General Boyd a follow-on question. A moment ago there was some statement as to the strength in NATO with respect to the number of squadrons we have present. How many squadrons do we have present in NATO, U.S. Air Force?

General BOYD. Well, I will have to count them up.

Senator WILSON. I am sorry, not squadrons, wings.

General BOYD. Wings. One, two, three, four, five, six, seven, eight, nine.

Senator WILSON. Can that be charged on someone else's time?

Senator LEVIN. I just notified Senator Wilson his time has just expired. [Laughter.]

Senator WILSON. This is a new strategy there, a new tactic in defense. [Laughter.]

General SCHEER. I have heard of the slow count, but not in this context. [Laughter.]

General BOYD. The answer, sir, is nine wings.

Senator WILSON. Nine wings. Why do we have only one in the south?

General BOYD. I do not know the historical antecedents for that, but the most powerful threat has always been in the central region.

Senator WILSON. Yes, I recognize that, and I think we all do. On the other hand, historically the Navy stated the other day in the course of our hearing on the carriers that we can no longer meet what had been a traditional Navy policy if not a specific requirement under treaty obligations for two carriers in the Mediterranean. We now have only one. What I described earlier as ferment in the Middle East, it seems to me is not growing less, it is growing more. We have a commitment to our NATO ally, Turkey. There may be new threats to Turkey. The question that I have—cost considerations apart for a moment—in light of the importance assigned by Mr. Woodworth and others, is this a wise thing to do to take that one wing out of Torrejon and take it out of the southern NATO theater altogether or move it back to CONUS?

General BOYD. I would have to support CINCEUR's view that that would not be a wise thing at all. It is a very important capability to him not only——

Senator WILSON. If we were to do that, how would the present obligation of that wing be fulfilled? Who would discharge it?

General BOYD. It would not be fulfilled in place. I mean, that is a net loss. If you brought the wing back and kept it in the Active force structure and declared it a dual-based squadron or dual-based wing, which we could do, it would have nearly as much capability as it presently does. But it would not have all of its capability that it presently performs. It could not perform all of its tasks that it currently is charged to perform.

RESPONSE TIME

Senator WILSON. Has there been a review in the Air Force of policy with respect to the capabilities to perform aerial refueling in connection with the relocation from overseas bases and specifically from NATO to the United States in the event that there had to be an immediate redeployment?

General BOYD. We can measure, yes, sir. We can measure what we require both in lift and in tanker requirements and, furthermore, what would have to be displaced from those other high priority things that are currently planned in the time phase force deployment list.

Senator WILSON. I do not want you to do that in an open session, but I think, Mr. Chairman, that it would be a very useful thing for us to know. I am advised that fully a quarter of the entire aerial tanker force would be required just to manage the redeployment from CONUS to the Mediterranean of the 401st if we were to decide—if the Air Force were to decide to bring it back—bring that wing back to the United States.

Incidentally, General, could you comment on the response time differential between a transatlantic redeployment from the 401st or of the 401st as compared with launch from Italy? I mean, that is not entirely a rhetorical question. Obviously there is a difference, but could you quantify it for us?

General BOYD. Yes, sir, I can quantify that but I think I have to do that in closed session or include it for the record because of the classification, but I would be happy to do so.

Senator WILSON. All right, I will be happy to get it for the record.

General BOYD. Yes, sir.

[The information follows:]

RESPONSE TIME

Senator WILSON. Could you comment on the response time differential between a transatlantic redeployment as compared with launch from Italy?

General BOYD. Two squadrons of the 401st TFW deploy to base X and Y respectively within [deleted]. Third squadron deploys to base Y within [deleted]. The most responsive CONUS-based units are dual-based units which must be available for employment in Europe within [deleted.] A three-squadron wing has the following availability criteria based on a "no plan" contingency:

Unit	WRSK	Availability[1]
Squadron No. 1	[deleted]	[deleted]
Squadron No. 2	[deleted]	[deleted]
Squadron No. 3	[deleted]	[deleted]

[1] Includes generation, flight time, and regeneration.

For deliberate planning (global war), generation, deployment, and/or employment are based on the OPlan flow; NATO's priority for forces. As CONUS-based augmentation units increase or are robusted, the total time required to deploy the total force in a global scenario is increased since more forces need to be moved; airlift requirements increase. Although you can compare response times, their differential may not be an accurate indication of lost capability. A one-to-one comparison may not indicate significant loss in response. Each additional squadron which is required to be airlifted to the theaters, causes a slip (domino effect) in the arrival of the total force to all theater CINCs.

Senator WILSON. The only other comment I would make, and I think my time is about expired, Mr. Chairman, it seems to me that a concern of this subcommittee, in particular in context of our own desire to realize a reduction of tensions by a realistic and safe reduction in the conventional imbalance between the Warsaw Pact and NATO forces, is the need to address the fact that we have been making reductions with no fanfare and no credit, certainly not from the western media, because we have been making reductions that are budget-driven, completely on a unilateral basis.

There has been no bargain for exchange at the negotiating table. We are getting no credit, in marked contrast to the bemusement—I will put it that way—of the western media at the slightest suggestion emanating from the Warsaw Pact for any reductions. And it seems to me at some point we could just tote up what we have done and what we are contemplating doing and if reporters are not interested, I am. I think it would be a very interesting thing to see what has actually been done on the side of the Warsaw Pact and compare what has been done on our side.

Mr. WOODWORTH. We would agree with that, Senator. The picture is a paradox in many ways, and I think that is what you are pointing to.

Senator WILSON. Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Senator Wilson. Senator Glenn.

STATEMENT APPROVAL

Senator GLENN. Thank you very much. Gentleman, this is a prefaced question. First, did your statement have to be checked through OMB?

Mr. DUNCAN. I don't believe it was checked with OMB at all. It was checked within the Department to make sure it reflected the Secretary's views, but not OMB's.

Senator GLENN. Okay, thank you. We have had some problem with that recently on some conflicting statements and people having information chopped out of some things. I am also making that a standard question these days in hearings in the Governmental Affairs Committee.

Mr. DUNCAN. Senator, let me amend that to say that it was cleared with whoever we needed to clear it, but nobody came back and said we had to change a word.

Senator GLENN. But when you prepared your statement, when it came back to you cleared from wherever that was, were there any changes made in it?

Mr. DUNCAN. No.

SEVERANCE PAY TO SPANISH LOCAL EMPLOYEES

Senator GLENN. Fine. Good. Mr. Woodworth, last week Lieutenant General Leland, the Chief of Staff of European Command, testified that the United States will be required to pay severance pay to Spanish local nationals who lose their jobs with the United States when the 401st gets kicked out by the Spanish Government. Why in the world do we have to pay severance pay when they are the ones kicking us out?

Mr. **Woodworth**. Senator Glenn, the answer lies in the agreements that we have had with Spain both in the 1982 agreement and the new agreement which has just been ratified a couple of weeks ago by the Spanish Government. In both cases those agreements have contained provisions for paying severance pay. The inclusion of those provisions for severance pay are there because they are consistent with and, in terms of our agreement with Spain, a necessary part of Spanish employment practices. This is standard practice in Spain, in general, across the board in their economy. So, we are reflecting accurately Spanish practice, and we think reasonably so.

Senator **Glenn**. Yes, but even when we are not the ones that are terminating? When it is the Spanish Government that wants to terminate our legal—is there a legal requirement that we do this? It was written into that agreement?

Mr. **Woodworth**. Yes, sir. Let me address that because we gave that considerable attention ourselves as we were concluding the negotiation for the latest agreement and given the circumstances under which we were vacating Torrejon.

Senator **Glenn**. Before you explain the legalities of it, how much money is involved here? How much do they get? What is the average payment per employee? How does it compare with their yearly compensation? Can you give us some details of this thing so we know how much we are getting rid of?

Mr. **Woodworth**. Yes, I can. We estimate that the maximum cost in severance pay would be on the order of $11-plus million. Now, that is a maximum figure.

The rules work this way. For each year of employment, a Spanish local employee gains the equivalent of 23 days of severance pay for up to a maximum of 15 years. For example, if you have worked for 15 years as an employee of the United States, you would have a maximum right to 1 year of annual salary as severance pay. Now, the average salary for our employees in Spain is about $11,000. The highest salary, which in this case is for three local employee doctors who have served our Armed Forces community there, is about $33,000, I think, if I have it correctly.

Now, we considered the very question that you asked: Is this right given the circumstances in which we are leaving Torrejon? The answer we concluded is that, yes, it is because the employees concerned are hired by the United States and are hired as individuals, if you will. They themselves were not responsible for the outcome of the negotiation or the actions of the Spanish Government as such, and our responsibility was to them as employees. We felt that that responsibility, which was reflected in our agreement, should be honored.

Senator **Glenn**. I do not question for one second the fact that they deserve help, and if this is customary over there in Spain, that is fine except I do question our responsibility for it. Why is not the Spanish Government picking this up? They are the ones that are terminating, not us. Is that not covered in our legal documents that if they terminated, we would not be responsible for such things as this?

Mr. WOODWORTH. The nuance of the negotiation is a bit different than that. The nuance of the negotiation is that we agreed for purposes of the agreement that the wing would depart. Am I making that clear? We agreed that we would do that.

Senator GLENN. Yes, but——

Mr. WOODWORTH. They forced the issue. They forced the issue, but you understand——

Senator GLENN. What option did we have?

Mr. WOODWORTH [continuing]. The agreement is part of the solution.

Senator GLENN. We agreed we would depart. Did we have the option of staying?

Mr. WOODWORTH. Not if we wanted to complete the rest of the agreement.

Senator GLENN. Well——[Laughter.]

Mr. WOODWORTH. Senator, this was a negotiation; you have been involved in those yourself. I am explaining to you the nuance of the negotiation. That in and of itself did not change our responsibilities.

Senator GLENN. They terminated us. We were willing to continue. Now, we are negotiating because they said we could not stay. Now, we are saying we have to negotiate this because we are leaving, and we have to negotiate on favorable terms because we are leaving as though it were up to us to leave, which it was not. That is a little bit convoluted reasoning, if you do not mind my saying so.

Mr. WOODWORTH. I understand, Senator. But remember, we were negotiating an entire agreement, the one——

Senator GLENN. What did we get? In effect, then, we are negotiating. Okay, we agreed to pick up $11 million in employee separation payments. What did we get for that?

Mr. WOODWORTH. For that particular point? I do not think there was any——

Senator GLENN. What did we get on the other side of the quid pro quo for that little turkey?

Mr. WOODWORTH. I am not sure that there is any direct relationship between that particular point and any other point. It is part of the overall agreement.

What we did settle with in Spain was, in the final analysis, apart from the departure of the 401st, a good argument. We have no quarrel with you on the 401st, I believe; we found this to be a highly unsatisfactory result, but one we could not change if we wanted the agreement, one we could not change. There are other virtues in the agreement, in fact, which serve our interests very well.

Senator GLENN. But this was not in the original agreement when we went in, then. This is our departure negotiation agreement you are talking about, is that correct?

Mr. WOODWORTH. No—I am not sure if I understand that.

Senator GLENN. When we went in——

Mr. WOODWORTH. This is part of the——

Senator GLENN [continuing]. Was the severance agreement put in when we went in and signed the base agreement to begin with? Was this severance agreement that we are exercising now here or being required to exercise, was that in the original base agreement?

Mr. WOODWORTH. Yes, it was. It was in the 1982 agreement and in the preceding editions of that agreement. It has been renewed over the years, as I think you know. It was included in the new agreement which has now just been ratified. Bearing in mind, of course, that we remain in Spain in a number of locations, we will continue to employ Spanish local employees under the terms of this agreement for its period of 8 years. The conditions of severance pay will continue to apply.

RELOCATION OF 401ST TFW

Senator GLENN. Okay. When we agreed to go into southern Italy with the new base there that the 401st was going to be based at, was not that decision mainly a political decision pushed by the Italian Government? This was a form of economic aid for that part of Italy, was it not?

Mr. WOODWORTH. No, sir. I think that would not be correct. I think Italy—well, it would be safe to say that from the standpoint of Italy, they were not pushing for one solution or another. In fact, from the Italian standpoint they incurred a certain amount of political liability, if nothing else, in terms of basing the wing. There was and there continues to be a certain amount of political oppositon in that country to the basing of the wing. But, it was NATO that went to Italy and not Italy to NATO concerning the relocation of the wing.

Senator GLENN. Okay, why do we not—as I understand it there is a base that has been built and not being used that was to be the cruise missile base at Comiso in Sicily which is not too far away and has the houses, all the infrastructures there. It does not have necessarily the runway that would be required I believe and some things like that. Was that looked at as an option?

Mr. WOODWORTH. Comiso was one of the options that the Italians looked at when they were invited to host the wing. They examined a whole set of options to see what would be the most logical and doable. Comiso was one of the locations that was looked at. But for a number of reasons, Comiso is simply not a practical alternative.

Senator GLENN. Why?

Mr. WOODWORTH. Well, the facilities that were built for Comiso, of course, were tailored and built for the cruise missile base that is there now which we will be vacating. It is not possible to locate a runway at the immediate Comiso location because of the geography of the situation and the surrounding circumstances.

Senator GLENN. That is a pretty good reason.

Mr. WOODWORTH. It is a pretty good reason.

TOTAL FORCE POLICY

Senator GLENN. Mr. Duncan, the total force policy has been in effect in the Department of Defense since 1973, over 15 years. Are you aware of any definitive DOD study that is generally accepted as the singular authoritative document on the total force policy in the Department of Defense?

Mr. DUNCAN. I am aware of several documents, Senator. Singular, authoritative—if you imply by that a comprehensive document that purports to answer all questions about total force, no. But what we do have are several DOD directives that are policy statements by the Secretary addressing various aspects of total force policy. We also have memoranda from the Secretary of Defense. We also have such things as the Defense Guidance which we deal with, of course, within the PPBS process. Taken cumulatively, there is a clear statement, but there is not a single piece of paper that I am aware of.

ASSIGNMENT OF MISSIONS

Senator GLENN. My time is up, but maybe you can answer this very shortly. What authority does your office have in determining the assignment of missions from the Active to the Reserve Forces and how do you exercise that authority? In other words, do you have authority to transfer from Regular to Reserve to Guard and how do you make those judgments?

Mr. DUNCAN. In brief—and I will ask Mr. Berteau to correct me if he thinks I have misstated it—but basically that is a secretarial decision. The Secretary starts the process with his Defense Guidance, a broad policy philosophical statement to the services. The services then go through their own PPBS process, follow the Secretary's guidance, make initial recommendations on force mix between Active and Guard/Reserve. Those are then reviewed during the cycle of the PPBS process on a continuous basis. We look at them directly and under a very hard light during the meetings of the Defense Resources Board, and then we make recommendations to the Secretary and he either rejects them or accepts those recommendations.

Senator GLENN. Does he have authority to make those changes?

Mr. DUNCAN. The Secretary of Defense has authority to make changes——

Senator GLENN. Without coming back to Congress?

Mr. DUNCAN. Well, I guess I would have to know more about which mission, but I am talking in the broad philosophical sense. The answer is generally "yes." Perhaps you should give me a specific example I can respond to.

Senator GLENN. We are over on my time. I will get into that the next time around.

Senator LEVIN. Thank you, Senator Glenn. Senator McCain.

RISKS OF REDUCING AIR STRENGTH IN EUROPE

Senator MCCAIN. Thank you, Mr. Chairman. I think that it is important, Mr. Woodworth and General Boyd, to discuss this issue in the context of the difficulties that we are having in conducting operational training in the Federal Republic of Germany today. It is extremely difficult. It is my understanding that it is a court order that is preventing us from conducting low level flights.

Public opinion in West Germany is clearly strongly opposed to the annoyances as well as the unfortunate number of aircraft accidents that have taken place in the last couple of years. While we are talking about a lot of important theory and policy here, I think to some degree it has to be grounded in the continuing difficulties we have in maintaining the operational capability of our air assets that are there. General Boyd, can you give me an assessment of the military and operational risks that would result in reducing the air strength in Europe?

General BOYD. The risks, Senator, I cannot quantify them, I do not think, with any precision. Clearly they are going to increase. I can tell you the significant capability that the 401st represents for SACEUR and the southern flanks, a significant percent of his capability in several important mission areas. I can tell you that with precision either in closed session or for the record, but it is a very important arrow in his quiver.

Senator MCCAIN. How long would it take for a squadron to redeploy to a base in the Federal Republic of Germany if you were just redeploying the aircraft and the pilots and had the support equipment and munitions in place?

General BOYD. Can I answer that for the record or in the classified session? The Time-Phased Force Deployment List data, which is what you are really asking, is classified, sir, and I will be happy to answer that for the record.

[The information follows:]

Unit deployments from the CONUS to Europe normally take [Deleted] days. Regardless of whether support equipment and munitions are in place, deliberate planning always includes deployment of associated personnel, equipment, and support, in addition to the aircraft and pilots. If only the aircraft and pilots were deployed (no munitions loaders, fuels personnel, security police, maintenance personnel, cooks, supply, transportation personnel, etc.), it would take [Deleted] squadrons (including generation, flight time, and regeneration). The unit's actual arrival date would depend on where the unit fits into the CINC's priority and/or the OPlan flow.

IMPACT OF REMOVAL OF U.S. AIR UNITS

Senator MCCAIN. Mr. Woodworth, what impact would the withdrawal of Active U.S. air units have on the U.S. negotiating position in the CFE talks?

Mr. WOODWORTH. I think to some extent it depends on units and on levels, so it is not possible to make any broad generalization. I think as a general proposition, however, in the view we have taken both in examining our force posture for the next fiscal year and looking at the negotiating situation, is that our best posture is to maintain our current force structure or something close to it except for adjustments that may be required by budget adjustments.

Senator MCCAIN. Is it not true that we have not included tactical aircraft in the CFE talks?

Mr. WOODWORTH. That is correct. It is fair to say that if changes were made in the force structure we have in Europe, for example, changes that were unrelated to particular categories of forces that we were negotiating, it would have a different effect, surely, and presumably less effect than if we were changing forces that fell in categories we were negotiating.

Senator MCCAIN. Are there preferable ways, in your view, to reducing U.S. military forces and costs in Europe as opposed to reducing Active air units?

Mr. WOODWORTH. Are you asking, are there other changes that we could make in Europe besides air units?

Senator MCCAIN. In other words, suppose that American public opinion, which I think is accurate, is strongly in favor of a reduction in our military forces in Europe. Are there preferable ways for us to do that than the reduction of air units, in your view?

Mr. WOODWORTH. Well, there may be, Senator McCain, but I would prefer not to try to venture a guess of what those might be. If we were choosing to do that, I think we would take a larger decision taking into account a number of considerations and recommendations of the CINCs and our own headquarters staffs here, both OSD and services, and reach a balanced conclusion. I do not want to guess at that.

COSTS TO DATE ON MOVE TO CROTONE

Senator MCCAIN. When we say small amounts around here, it is all relative, and maybe you could give us some ballpark figure as to what we have spent to date on the move to Crotone.

Mr. WOODWORTH. Can I give you that for the record to be sure because—you are right, they are relatively small——

Senator MCCAIN. Like $5 million or——

Mr. WOODWORTH. I think it is on that order, as a matter of fact.

Senator MCCAIN. And how much more do you think we are going to have to invest? What is going to be the U.S. investment overall?

Mr. WOODWORTH. The total cost of the base? If I could, with your permission and to mention to the others, I will take a second and address some of those costs, because I think there have been, in my view, some misconceptions.

Senator MCCAIN. Well, while you are on the subject, you might also include how much our allies are going to spend.

Mr. WOODWORTH. Right, right. The total estimated cost of the base that NATO would pay for out of the NATO infrastructure fund is currently estimated at $827 million. The U.S. share of that figure is approximately 28 percent, which is our standard share of the infrastructure fund, and that comes to $231 million.

Now, we have also agreed to pay out of U.S. funds for a bilateral—with Italy—air-to-ground range costing us $7 million. We have also agreed to pay out of our own funds for recreational facilities. That is another $14 million. Additional recreational facilities will be paid out of nonappropriated funds of $4 million. That comes to $26 million. The total cost to the United States, direct costs, combining our share of the infrastructure fund plus these direct costs, comes to $257 million.

Senator MCCAIN. So, our allies will pay about $600 million?

Mr. WOODWORTH. Out of the total cost from the NATO infrastructure fund.

Now, if I could just take a minute, because I think there has been some misunderstanding concerning the figure you may have heard earlier that has been used, around half a billion dollars in U.S. costs. Now, what is being done, so far as I understand the use of that figure, has been to add in the housing costs. Why don't I take a minute to address that. I assume that is useful for me to do. I assume that is and has been an area of question.

The arrangement for the housing cost is that NATO, as a part of the $827 million, is going to fund up front the construction of the housing in Crotone. The total cost is about $180 million. We have agreed with NATO that we will repay NATO on an annual basis over a period of 10 years, thus at an annual cost of about $18 million.

Now, the arrangement that has been arrived at for housing is based on the following reasoning. Our forces at Torrejon now pay housing costs through lend-lease arrangements primarily. Most of our personnel are housed in lend-lease arrangements. The Air Force, as with all Air Force personnel, are funded and pay for their housing in one fashion or another. In effect, what we have done, and the underlying reasoning of the arrangement with NATO, is that that money, available to our Air Force personnel as with all Air Force personnel, wherever assigned or for that matter all service personnel, would be allocated to a repayment to NATO on an annual basis of that amount. At the end of the 10-year period, we will, in effect, have assumed the equity value in the housing, if you will. We will owe nothing more beyond that period of time other than operations and maintenance, which we would normally pay for.

The arrangement, therefore, is not an added cost. I think it is not correct to add that cost, the $180 million, to the U.S. cost of the base because that is money that we pay, in any case, as a regular part of all Air Force personnel or service personnel who are paying their housing costs. In the end it, in fact, ends up being a better arrangement because we ultimately gain the equity, if you will, in the housing in Crotone. We do not have that at Torrejon.

Senator McCain. I am not familiar with land values in Italy, but I do know that in Japan the Japanese Government pays for housing as part of the agreement. Although I understand your logic, I still do not understand the basis of the argument that we should be paying for that. It is part of our presence, and we would have to bring our families over there.

WITHDRAWAL OF 401ST TFW

Mr. Chairman, I have a question that Senator Wilson asked for the record. Is it important to keep the 401st in the Mediterranean until such times as we have a credible B-1 or B-2 capability? I would appreciate it if you would answer that for the record, General Boyd.

General Boyd. Yes, sir.

[The information follows:]

Impact of Withdrawal of Dual Capable 401st TFW

The 401st TFW peacetime and wartime contributions to NATO readiness and deterrent posture are substantial. Retaining the 401st in the Southern Region supports our forward deployed strategy which has successfully prevented the outbreak of major conflict in Europe since World War II. Relocation of 401st to Crotone is essential to U.S. credibility and Alliance solidarity. Additionally, withdrawal of the 401st before a CFE agreement would seriously undermine our negotiating posture and reduce U.S. flexibility for any subsequent reductions.

As the only in-place USAF tactical fighter unit in NATO's Southern Region, withdrawal of the 401st represents a loss of [deleted] force, [deleted] and [deleted] of air forces after full reinforcement of the Southern Region.

In peacetime, the 401st is tasked to maintain [deleted] aircraft at [deleted] in the Southern Region at [deleted] requiring up to [deleted] to assume a [deleted]. The [deleted] is also tasked to deploy at [deleted] with [deleted] to be in place within [deleted] and [deleted] in place within [deleted]. From Crotone, the 401st would not require any tanker support to [deleted]. The 401st also deploys in support of the [deleted] in the Southern Region.

In wartime, the unit is tasked with [deleted] location. When directed to attain [deleted], the 401st is tasked to generate [deleted] and a total of [deleted] aircraft within [deleted] to [deleted] posture.

Current SECDEF guidance directs that any reduction of units committed under the NATO Defense Planning Questionnaire (DPQ) should be offset by other US units. From an AF perspective, adherence to this guidance in the case of the 401st TFW would be extremely disruptive. These peacetime commitments would have to be assumed by in-place USAFE units to meet required response criteria. Of the eight remaining F-16 squadrons in USAFE, all are located in the Central Region and [deleted] commitment. Central Region squadrons would have to maintain continuous peacetime aircraft and personnel deployments to forward based Southern Region locations [deleted] requirements. Rotational deployments are expensive in terms of TDY costs, loss of training opportunities, and unit morale. Alternatively, the United States could seek a release from NATO for these peacetime tasks; however, in light of the INF Agreement, further diminution of our Southern Region nuclear deterrent posture should be avoided. The 401st TFW wartime commitments could be partially offset by dedicating three Active CONUS F-16 squadrons as dual-based. The ability to meet the most stringent wartime taskings with CONUS units is problematical, as other high priority augmentation forces with worldwide commitments would be displaced in the reinforcement flow by this new requirement. Adjustment to Unified Command Plan force apportionment would be required with other theaters losing assigned forces.

Senator **LEVIN**. Thank you, Senator McCain.

Senator **MCCAIN**. Thank you, Mr. Chairman.

Senator **LEVIN**. Senator Thurmond, courtesy of Senator Exon, will be next.

AIRCRAFT OVERFLIGHTS AND NOISE LEVEL

Senator **THURMOND**. Thank you very much. Mr. Woodworth, the European population has become increasingly vocal regarding the number of aircraft overflights and noise level. I would expect that the civilian population would welcome a reduction in Active units. What, in your opinion, would be the reaction of NATO and the European governments if we implement any of the proposed alternatives to retro-grade Air Force squadrons?

Mr. **WOODWORTH**. I think the reaction of the governments would be opposed to that since we have all agreed that we would maintain certain force commitments. What they would agree is that we should do all we can to alleviate the inconveniences of necessary training, and indeed we have been working with our allies in Europe to find ways to do that. I think that would be their answer.

ACTIVE SQUADRONS TO RESERVE TO LESSEN PILOT LOSSES

Senator **THURMOND**. Mr. Berteau, in Mr. Hale's study he indicates that moving Active squadrons to the Reserve would offset some of the pilot losses that the Air Force is currently facing. Have you had an opportunity to review Mr. Hale's report and do you agree with his assessment on the pilot issue?

Mr. **BERTEAU**. Senator, we have not had a chance to review that report. We only became aware of the overall thrust of it at the very end of last week, and we have heard some of the numbers today. I am not in a position to comment on any of the assumptions underlying his numbers or on our views of the validity of those numbers. We have not seen any of the details of that until just recently, the very end of last week, Friday afternoon, and we do not have any analysis of how good we think those numbers are, what kinds of things are included or not included within that, so I am not in a position to comment on that.

FORCE MIX

Senator THURMOND. Mr. Duncan, General Scheer indicates in his statement that the current force mix is about right. He further believes that any significant expansion of the Reserve Forces would impact on Reserve manpower at some future date. If there were to be a significant increase in Reserve units, would the Reserve recruiting base be broad enough to meet their manpower needs? I ask this question because of a current struggle the Air Force is having meeting their recruiting goals.

Mr. DUNCAN. Senator, I cannot answer the question yes or no, but we are concerned about that issue since so many of the experienced pilots who come into the Air Force Reserve components come from Active duty. The question is, stated a different way, if you reduce the number of Active Air Force pilots and shift more resources to the Reserves, do you reduce your recruiting base? I think the answer probably is yes, but I will also tell you that we have had very good success recruiting people into the Air Force Reserve components, so I cannot state with precision how it will turn out. I feel very good about our recruiting in the Air Force Reserve.

Senator THURMOND. Thank you.

Mr. BERTEAU. If I might add one thing to that with respect to the Air Force pilots, sir, the Air Force really does not have a problem recruiting pilots. They have a serious problem retaining them once they have recruited them, and there is a training capacity there that is important to preserve in terms of being able to keep training the number of pilots we need. At some point you reach a crossover point where the Active duty Air Force would not be able to train enough pilots to support the Active and Reserve force. We are not exactly sure where that point is. I think we are still on the downhill side of that point. At some point you cross over that point. We are looking closely at that question and watching it.

Senator THURMOND. Thank you very much.

MOVING THE 401ST TFW

General Boyd, in view of the CBO's proposal, what does the Commander in Chief in Europe give up if the 401st Tactical Fighter Wing is moved to the continental United States?

General BOYD. What does the Commander in Chief in Europe give up? I am not sure I understood the question, sir. Could you repeat it?

Senator THURMOND. In view of the CBO's proposal, what does the Commander in Chief in Europe give up if the 401st Tactical Fight Wing is moved to the continental United States?

General BOYD. Yes, sir. As Mr. Hale indicated in his earlier discussions, he would give up some of the response time that he has with that current in-place force. He gives up current mission with the 401st that cannot be performed by any wing stationed in the continental United States. He has these certain basic readiness requirements that cannot be met. They are 12-hour requirements. They cannot be met by any CONUS unit, so he gives up that capability, and he gives up the response time of getting a Reserve unit back into the theater in case he needs them.

FORCE MIX

Senator THURMOND. Thank you. Mr. Duncan, a lot of people believe in this time of declining defense budgets that the solution lies in moving more missions to the Guard and Reserve, and maybe I already asked General Boyd this. Please give me your candid assessment regarding the operational impact such decisions generally have upon Active Forces.

Mr. DUNCAN. The impact of transferring forces from the Active Forces to the Reserve Forces?

Senator THURMOND. That is right.

Mr. DUNCAN. I am not quite sure I understand the question, Senator.

Senator THURMOND. I will repeat it then. A lot of people believe in this time of declining defense budgets that the solution lies in moving more missions into the Guard and Reserve. Would you give me your candid assessment regarding the operational impact such decisions generally have upon Active Forces.

Mr. DUNCAN. I am not being evasive, but when I am asked a question like that, I respectfully request which mission and which service because in some cases we can transfer force structure with no decrease in military capability. Depending upon the mission, however, if you make some transfers of force structure, you will have a decrease in military capability, and it is a question of how much——

Senator THURMOND. Well, if you bring this unit back here and put them in the Reserve, what is the impact of that on the mission?

Mr. DUNCAN. Well, for sure, as the General said, response time would be one of the considerations. We have pretty quick response time with the Reserve components but clearly it would not be as quick as having Active Forces on the ground in Europe.

Senator THURMOND. Would it be detrimental to the security of our country as well as Europe? If you do not know, do not answer. I just ask the question.

Mr. DUNCAN. Secretary Cheney has concluded that he would prefer to leave the forces there, so certainly he has concluded that it would be wise to leave them there and that it would affect our security not to do so.

Senator THURMOND. Mr. Chairman, that is all I have right now. I have to go to the floor. Thank you very much.

Senator LEVIN. Thank you very much, Senator Thurmond. Senator Exon.

Senator EXON. Mr. Chairman, thank you very much and welcome, gentlemen.

RELATIONSHIP WITH NATO MEMBER NATIONS

I am kind of concerned about this. I recognize we have to make some savings somewhere up and down the line. But as we approach the 40th celebration of NATO and with the relationship between the member nations pretty much in a state of flux right now, to what extent would withdrawal of the wing contribute to further strained relationships among the Alliance? Obviously it would be some—I would ask you that question, Mr. Woodworth. Do you think it would be serious, not so serious? Specifically how would you answer that question?

Mr. WOODWORTH. Senator Exon, I would answer it this way. If it developed that the United States was not able to uphold its end of the deal that was agreed on the 401st last year, I think the results would be serious in the Alliance on several counts. First, I think with respect to our close ally, Italy, it would be an extremely troubling development, given the commitments they have made politically and otherwise. Second, the Alliance in general would regard this as a highly unexpected and indeed a highly unfortunate and divisive reversal of a position and a decision that was solemnly taken last year together by the whole Alliance.

Senator EXON. When did this happen? If I remember, there was about a year where we did not have any home for this when they moved it out of Spain. Were we not all elated when we were able to work out something with the Italians on this?

Mr. WOODWORTH. That is correct, sir. The strange thing about this is that as we were going through this last year and earlier in this hearing before you were here, I reviewed some of what was involved in that decision and the period of time that it took, which was effectively a year of extensive consideration that went into the decision. I think the strong feeling was that this was the correct decision to take. A strong political commitment and financial commitment, for that matter, was made in this decision.

We were also enjoined by Congress, what the law and what the legislation called for last year, not to fund anything for the relocation of the 401st except by infrastructure funds. And so, in fact, that is what we went out and did. We negotiated that very result, and what we ended up getting from NATO was a commitment to the expenditure of infrastructure funds on things that NATO has never paid for before, and especially to that magnitude for a single facility of that kind. So it was truly a unique decision, a unique commitment of funds.

In addition, it was a unique political commitment and what drove it even further was the burdensharing debate. To add a third point to the consequences, if we reverse ourselves on this issue, we are going to harm ourselves seriously with the allies with respect to our credibility about burdensharing.

Senator EXON. It seems to me that this decision should be given careful consideration. If we are going to put the 401st in Italy, I would think that we should also take a look at how this base could be used for other missions, too. In peacetime it would be a staging area. Obviously, if war broke out, it would be very critical in the Mediterranean. Besides serving, though, in peacetime as a staging base, are there any other uses that this base could be put to in our interest and in the interest of NATO?

Mr. **Woodworth**. In its peacetime situation as currently envisioned?

Senator **Exon**. Yes.

Mr. **Woodworth**. Well, our goal has been that it will be built as a peacetime military base, and that it should be committed solely to that function. There are many, many advantages to having it committed to that sole function, for security and other reasons.

BRINGING HOME ASSETS OTHER THAN 401ST

Senator **Exon**. Let me ask you this question, General. If you had to make the decision, instead of the 401st, what about other assets that might be brought back home in lieu thereof and from the European theater? Has there been some consideration given to other options we have in that area?

General **Boyd**. Yes, sir. But there are no choices that I believe the Commander in Chief of Europe, CINCEUR, would be willing to advance at this point.

Senator **Exon**. Is that from a tactical standpoint now or political standpoint or both?

General **Boyd**. Probably both, sir. I do not think he is willing to give up any force. He continually, and I think probably testifies before you all, that he has a very formidable threat that he has to address, and that he certainly does not have any excess force in addressing that threat. I do not think he would be willing to give up a soldier, sailor, or airman as long as the Soviet Union and Warsaw Pact are postured as they are facing him and NATO.

Senator **Exon**. You are saying you do not want to give up anything. But, if something has to be sacrificed because of the budget constraints, it is your recommendation that the 401st's return to the United States would make the most sense or, to put it another way, cause the least damage from the standpoint of our relationship with the Europeans as a whole and our defenses, particularly in the Mediterranean?

General **Boyd**. No, sir, that is not what I am saying. I believe—and correct me, Mr. Duncan, if I am wrong—I believe Secretary Cheney said that if he brought forces, air forces, home from Europe, he would bring something other than the 401st, is that correct?

Mr. **Duncan**. Well, he has certainly made it clear that he wants to leave the 401st there. No doubt about Secretary Cheney's position on that.

Senator **Exon**. In other words, returning the 401st was not anywhere near the top of the choices that the Secretary of Defense would make?

General **Boyd**. That is clear. Yes, sir.

Senator **Exon**. Thank you, gentlemen. Thank you, Mr. Chairman.

Senator **Levin**. What would be higher up on the list?

Mr. **Berteau**. What the Secretary has said a number of times—and he has repeated this internally as we went through the decisionmaking process as well—is that he feels that any reductions we would take in our forces in Europe should be matched by commensurate or, you know, should be taken in the context of commensurate Soviet actions to take reductions as well.

Senator LEVIN. I understand that. That was not the question.

Mr. BERTEAU. And such reductions should be contained within that negotiated posture.

Senator LEVIN. If the choice were an air wing in central Europe or in Italy, which would it be?

Mr. BERTEAU. We do not have a prioritized list of, if we take so much out, these would be the ones that would be lopped off.

Senator LEVIN. I know you do not, but I am asking you for your opinion so that we can try to understand what the priority would be. Are you saying that that is such a high priority to maintain that wing in Italy moving it from Spain that you would rather move an air wing back from central Europe than you would from southern Europe? Are we to read that in your testimony, Mr. Duncan?

Mr. DUNCAN. I do not think that has been addressed in recent months, certainly not with Secretary Cheney. If it has, I am not aware of it, and I have participated in all of the discussions.

General BOYD. I think I misspoke, Senator. Clearly he has said that he wants to keep the 401st there.

HISTORY OF DECISIONS REGARDING 401ST

Senator LEVIN. Did the Air Force propose to pull back the 401st 2 years ago?

Mr. BERTEAU. When we looked like we were facing the option of Torrejon being shut down and we had no other option on the table, as part of the program review drill at that time, the Air Force—that was a discussion. I would not say the Air Force proposed to pull back the 401st, but an option was put on the table of did we want to take the 401st down entirely if we were going to lose Torrejon and could not leave it in Europe.

Senator LEVIN. Was there not an actual announcement in the budget process a few years ago that we were pulling back?

Mr. BERTEAU. Yes, sir, there was such an announcement. And in the context of that, of course, we had the ongoing negotiations which have already been described to you in terms of the NATO negotiations there.

Senator LEVIN. Did those negotiations start after the announcement was made that we were going to pull it back?

Mr. BERTEAU. I would have to check the record of when any specific public announcement was made. I do not recall off the top of my head.

Mr. WOODWORTH. I think I have this. I will correct it for the record if I find out I am wrong. When the result came up on the 401st, as far as the Spanish negotiations are concerned, the Air Force faced the problem of what to do with the wing. Without an alternative yet in terms of assistance from NATO, the Air Force, in evaluating its priorities, concluding that from the standpoint of money, as I understand it, it would be prepared to return the wing to the United States.

Senator LEVIN. That was before you sought to negotiate with NATO for an alternative solution?

Mr. WOODWORTH. That is right. When this decision was taken, the concerns about the removal of the wing were expressed in NATO, and we engaged in discussions with our allies. Secretary Carlucci, as you know, was deeply involved in that. The net result was that NATO agreed to assist and, of course, that changed the picture.

Senator LEVIN. But before those negotiations were undertaken, there was an announcement that we were going to have to withdraw that wing.

Mr. WOODWORTH. That was Secretary Carlucci's position.

Senator LEVIN. Yes.

Mr. WOODWORTH. Without support from NATO we were going to withdraw the wing.

Senator LEVIN. The position was not that, gee, we hope we can avoid this. Let us try to negotiate a way to avoid it. His position was we are going to withdraw that wing, and then that led to negotiations with NATO?

Mr. WOODWORTH. That is correct. As I understand it, I think that is correct.

General BOYD. Mr. Chairman, if I may perhaps add one piece to that answer, the Air Force did do programmatic excursions in terms of bringing the 401st home, but we make our programmatic decisions in support of both warfighting CINCs and clearly the Secretary of Defense when both the warfighting CINCs, CINCEUR, and the Secretary of Defense preferred to keep the 401st in Europe, the Air Force programmatic decision followed those desires.

Senator LEVIN. General, do you agree with the CBO figures on savings?

General BOYD. No, sir. I cannot say that I agree with them or disagree with them. We have not seen those figures in an official way.

Senator LEVIN. Would you give us for the record any disagreement that you have with them?

General BOYD. The slides that I did see of them indicated that they had used the Air Force model with adjustments. Now, I do not know what those adjustments are, and they——

Senator LEVIN. Would you give us any adjustments that you have for the record? Would you take a look at them and supply for the record any disagreements that you have?

General BOYD. We would be happy to. The Air Force would be happy to examine that thing in its entirety and give you for the record our view, yes, sir.

[The information follows:]

We appreciate the opportunity to comment on the prepared statement presented in testimony by the Assistant Director, National Security Division, Congressional Budget Office (CBO) on costs and effects of transferring portions of the Air Force Active Component (AC) to the Air Reserve Component (ARC). Before commenting on CBO's proposal, it is necessary to point out two fundamental and important factors when considering transferring force structure from the AC to ARC. First, our AC forces are stationed overseas in support of our U.S. national strategy of forward defense, providing continuous in-place deterrence. Our Active CONUS-based forces provide the necessary peacetime rotation and training pool for forward deployed units and our ARC CONUS-based forces augment in-place forces during conflict.

Any transfer of our forward-deployed AC forces to the CONUS would reduce deterrence in peacetime. Second, the AC provides the necessary management and support base for the Total Force, the Active and Reserve components. It is the AC which provides the major portion of: education and training; research, development and testing; acquisition; wholesale logistics; war planning; and, other management and support functions necessary to accomplish our mission—to fly and fight. Force structure transfers from the AC to the ARC threaten the AC's ability to provide this necessary support to the Total Force. Without such a base from the AC, the ARC could not exist. These two factors are critical and must be considered in any AC/ARC force structure proposal. My remaining comments will deal with CBO's proposal.

CBO's proposed options to transfer from 125 aircraft (5 squadrons) up to 305 aircraft (14 squadrons) from the AC, including up to 5 forward-deployed squadrons, to the ARC are unworkable in the timetable proposed. The options would result in less responsive, and for those removed from Europe, less optimally deployed forces. The proposal presents an apparent savings but fails to consider the multiple major unit conversions and transfers necessary to robust existing units without mixing different versions of aircraft. The CBO proposal also understates the loss of operational capability, dismisses the impact on national strategy, and exacerbates the pilot inventory/retention problem.

The CBO proposal does present a balanced cost analysis within the constraints of the SABLE model, but it is incomplete. Even though the projected operating and support savings appear attractive, they cannot be considered budget quality without the additional construction, manpower, training, and other costs which would surface and reduce projected savings.

The testimony's main cost reduction methodology is to robust existing ARC units by increasing the size of ARC squadrons by transferring aircraft from the closing AC units without creating new ARC units or changing unit missions. These assumptions are overly simplistic and therefore misleading. On the contrary, transfers of the magnitude and timing proposed would in fact require major unit restructuring in order to convert to new aircraft or models of aircraft and increase unit size. This would be necessary to avoid equipping a squadron with different aircraft models (tremendous maintenance, support, and training implications) since the ARC currently does not have any F-111s and very few F-16Cs. As a result, Option III would require one new unit and 9 to 11 major conversions, including five with new missions (e.g., reconnaissance to fighter/bomber, etc.). Such massive restructuring and conversion were not anticipated by the CBO testimony nor would it fall within the scope of simple "robusting." Additionally, while CBO's concept of robusting units does create efficiencies within the ARC, inefficiencies are created in the AC (e.g., creating a one or two squadron wing due to a squadron transfer without deactivating an entire wing or closing a base) which would generate a new set of undesired, costly problems.

In addition to our concerns with the "robusting" methodology, we also believe the "moderate" loss in operational capability is understated and misdirected. The decrease in operational capability is largely due to loss of specific operational capabilities inherent to in-place forces, the loss of immediate theater responsiveness, and increased response time of augmentation forces. ARC operates modern equipment and maintains very high readiness rates, however, they generally are ready in fewer roles than the AC. This is not a quality problem, but a real world role, training availability, and resources problem. Certain tasks are not appropriate for the ARC. For an ARC fighter unit to assume a nuclear role, it would either have to reduce its conventional capabilities or assume an ops tempo which would increase costs. But more importantly, it would place the ARC in a role for which they are not trained, organized, or equipped. Capability is also lost by virtue of the added time and resources to mobilize, generate, and deploy CONUS forces overseas. Even the small projected savings of transferring 16 C-130s would result in reduced AC tactical airlift training with Army and other DOD agencies. AC would also have more frequent overseas rotations (70 day deployments). Similar adverse impacts would affect the tanker force. KC-135 operations actually cost slightly more in the ARC than in the AC due to higher crew ratios needed in the ARC to meet alert requirements. Currently, the ARC has no standing commitment to support overseas Tanker Task Force taskings. Although the ARC has 22.5 percent of the KC-135 force structure, they only support 6 percent of the overseas obligations. These are operational impacts which reduce SAC's flexibility in managing the tanker force.

Strategically, bringing home F-16s and F-111s from Europe would significantly impact NATO by reducing peacetime deterrence of in-place forces. SACEUR would not have 108 fighter aircraft (Option III) to deter in peacetime nor fight until mobilized, generated, and deployed. For example, returning a NATO Southern Region F-16 wing to the CONUS would substantially reduce the region's strike and air defense forces. More importantly, the 401st Tactical Fighter Wing (TFW) represents the in-place fighter force structure in the critical southern flank. The crucial role of the 401st TFW as a deterrent force in peacetime and an on-hand fighting force during the early days of any conflict cannot be overstated. Deploying comparable units from the CONUS to Europe would require over 100 refueling and airlift sorties and would delay other high priority deliveries already planned by more than 1 day. Transferring in-place forces to the ARC (in the CONUS) ignores the significant shortage of inter- and intra-theater lift that currently exists. Loss of in-theater familiarity with terrain, allied war plans, weather, airspace, and allied operations would also result. It could create the impression that U.S. rhetoric on burdensharing has been in reality a transparent cover for burdenshedding. It would certainly cause a significant political fallout with our Italian allies for abandoning the hard-won NATO initiative to relocate the 401st TFW to Crotone, Italy. Additionally, US unilateral withdrawal from Europe which is not based on a strict military or political mandate will erode our leverage at the on-going CFE talks in Vienna. Contrary to the CBO testimony, these options challenge U.S. national military strategy of forward defense and represent a fundamental policy change to providing credible deterrence.

CBO testimony claims the options would improve AC pilot inventory/shortfall by reducing requirements. This is only true in the short run. By removing 125 to 305 aircraft from the AC, our ability to "absorb" new pilots would decrease by 49 to 104 cockpits per year and the projected requirement/inventory shortfall would worsen. This is because the AC "grows" its experienced pilot inventory in the Active flying squadrons. This diminished ability to "grow" pilots would have two serious manpower consequences. Former AC pilots are the majority of ARC pilot inputs; these pilots are already experienced and need less "aging" and training to maintain proficiency. Under Option III the ARC could experience difficulty meeting its recruitment needs from separating AC pilots due to the reduced size of the AC force, and the major increase in Reserve input needs. The ARC would have to recruit more new pilots and increase their ops tempo to "age" these inexperienced pilots in order to maintain the percentage of experienced pilots, thereby reducing the relative cost advantage of ARC units. The other serious consequence of transferring lower ops tempo CONUS missions to the ARC is that the AC would be left with more and/or longer periods of temporary duty, remote duty for each Active aircrew member, and higher alert activity missions for Active crews who already carry a heavier load in these areas than their ARC counterparts. The cumulative effect of these negatives is that AC pilot retention would be further degraded and existing pilot inventory problems would grow rapidly worse.

In summary, while seemingly attractive in a fiscal sense, the options presented by the CBO testimony are flawed. They go beyond mere robusting of ARC units and actually require major unit conversions. Evaluating AC/ARC force mix is a complex, dynamic process. The testimony understates the loss of capability, the erosion of our national strategy of forward deployment, and the negative impact on overall readiness. The Air Force, both AC and ARC, evaluates force mix during each planning, programming, and budgeting system cycle to balance cost, capability, and readiness. The present forward-deployed strategy is sound and the AC/ARC mix is in balance. We remain committed to providing the most combat capability possible to support our national security objectives within fiscal constraints.

Senator Levin. Thank you, General.

AIRCRAFT OPERATED BY RESERVE

General, do you believe that Reserve squadrons should not be operating 24 aircraft but should be limited to 18 aircraft?

General Boyd. No, sir, I do not believe that.

Senator Levin. Is it the position of the Air Force that Reserve units should have less than 24 aircraft per squadron?

General Boyd. No, sir. That is not the view of the Air Force, and many of our Reserve component squadrons do have 24 aircraft. And it is the view of the Air Force that we will plus all of them up to 24 over time.

It is, though, the view of the Air Force that the way you do that is not to draw down Active duty force structure so as to plus up 18 PAA squadrons in the Reserves. The best way to do that is to do it with new procurement over time.

Senator LEVIN. Well, the purpose would not be to plus up. The purpose would be to meet a budgetary requirement. But the effect of that, if it were done, would be to plus up the Reserves' wings from 18 to—squadrons from 18 to 20 or 22 or 24. So, you would have no objection if that were the effect on the action. You would object to the action, I take it, for other reasons, is that correct?

General BOYD. Well, yes, sir. We are trying to maintain a force structure that—and I understand what you are saying about budgetary reductions—provides the maximum amount of capability we can muster to meet the threat and the multi-national strategy. We do not think we can do that by further force structure drawdowns.

REMOVING AIR WING FROM SOUTHERN OR CENTRAL EUROPE

Senator LEVIN. If you were given a choice between removing an air wing from southern Europe or the southern flank or from central Europe, which would it be? If that were the hard choice provided that budget drove us to remove one air wing from Europe, bring it back home for the savings which the CBO has identified, would you give a preference as between removing it from Spain and not moving it to Crotone rather than removing one from central Europe?

General BOYD. I do not think that I should answer that question, sir. The CINCEUR, the warfighting CINC, the guy with the responsibility for the defense of Europe, is the guy who ought to answer that question. You are kind of putting me on the spot, sir.

Senator LEVIN. That is all right. Do you want to give us the Air Force's position for the record, then? You can check with them, perhaps.

General BOYD. Yes, sir, we can give you—well, I think we would have to give you CINCEUR's position and CINCEUR's position is he does not want the 401st to come home. He does not want any squadrons from the central region to come home.

Senator LEVIN. Well, my question is if the choice were that we had to find some place to make savings and we decided that we were going to make the savings by withdrawing one of the wings and using the Reserve capability instead, which is a fairly rapidly redeployable capability, at least compared to a number of other Reserve efforts that we have in other services—if that were the decision driven by budgetary constraints, it would be useful to us to know whether or not the Air Force would prefer that it be in one place or another or put it another way, that the Air Force would oppose it more in one place or another.

General BOYD. Sir, let me take that for an insertion, and I will try to get you an Air Force position on that question.

SHIFTING RESERVES

Senator LEVIN. This is my last question for Mr. Duncan. It is widely argued that it is hard to operate ships in the Navy Reserve because ships have to deploy frequently for 6-month periods and yet when the amended budget was submitted to us, there were major shifts from the Navy to the Navy Reserve, yet there were none from the Air Force to the Air Force Reserve. Why were you able to shift the Reserves where it is a harder job, the Navy, but not in the Air Force where it is, at least relatively speaking, a little easier?

Mr. DUNCAN. Sir, before I answer that question, I would like to request—I think General Boyd was put in a difficult position by your request that he state the Air Force position on the comparison between bringing the 401st back or some other wing. Could we answer the question on that as to whatever the Chairman of the Joint Chiefs' position is or something as opposed to the Air Force position?

Senator LEVIN. Absolutely. I was not trying to make that distinction. The CINC's position would be acceptable. Thank you.

Mr. DUNCAN. Yes, sir. In the amended budget review that we just went through, the Secretary made a decision to transfer those 24 FF 1052 class frigates to the Naval Reserve Forces over a period of time. That is a complex decision. It is not going to be an easy one. The Navy has worldwide commitments, and one of the obvious challenges is the manning problem for those 24 frigates. Sometimes there is a misunderstanding as to how Naval Reserve Force ships are manned. The breakdown between Active and Reserve sailors aboard the ships.

I am very encouraged about some of the hard work and creative thinking that has been performed by the Navy in recent weeks on that question. I am personally persuaded that, while it is not going to be easy in the context of this budgetary effort that we are being forced into, the Navy will be able to find a way to man those 24 frigates with Navy reservists.

Now, obviously, one thing that is under review, constantly, is the level of commitments the Navy has. And I guess that is a challenge the Secretary will be continuously focusing on, and especially after the National Strategy Review is completed. But there was no desire, or conscious effort, to single out the Navy this time. It is fair to say, and I think all my colleagues in the Office of the Secretary of Defense would agree, that in any given budget drill, whether it is an Execution Review or a Program Adjustment, we go through and look at missions from all of the services and try to figure out what is the most cost-effective way to meet those missions. And we do not single out a particular service.

Senator LEVIN. Senator Glenn.

Senator GLENN. Thank you, Mr. Chairman.

AUTHORITY OF THE SECRETARY OF DEFENSE

A while ago, Mr. Duncan, I said we would get back to this business of what authority the Secretary of Defense has. You had asked for an example.

What I was getting at was what authority the Secretary has right now, under existing law, to transfer from Regulars to Reserves, or whatever functions he wanted to transfer to different places—are those locked in tight, or does he have some fairly wide authority to make moves like that?

Could he bring the 401st back and distribute it—make it a Reserve outfit if he wanted to, without congressional approval?

Mr. DUNCAN. I am reluctant to answer the question without checking with counsel. But as a general proposition, Senator, I think he has very broad authority to make those kinds of decisions. I do not know that the question has been addressed in the specific context of the 401st. And I do not know the answer, specifically, but the Secretary has broad authority.

Senator GLENN. I wanted to know—you had asked for an example. I just used that as an example, since we have been talking about it. Do you know what his authority is to transfer Regular to Reserve, or vice versa?

Mr. DUNCAN. Statutory authority?

Senator GLENN. Yes.

Mr. DUNCAN. I have looked at the statutory authority to find the Secretary's Office, but, Senator, I will tell you, I have forgotten most of it and off the top of my head I cannot tell you what the statutory authority is. But it has never been an issue as far as we are concerned. There have not been such wholesale transfers. We do it on a mission-by-mission, case-by-case basis as the issues come up—to my knowledge, in recent years, at least. I will try to get an answer for the record.

Senator GLENN. I was getting into it because I think we are at a time period where there may be a lot of changes over the next few years. And it may be very important to have that very carefully spelled out, as to what he can do and what he needs new authority to do. NATO is in a state of flux, as it has already been pointed out here today. And I think it is incumbent for both of us to work together, both sides of the river here, to make sure that is very clearly spelled out so we do not go through a big difficult period every time something is proposed.

Mr. DUNCAN. Yes, sir. We will check into it.

[The information follows:]

As commander-in-chief of the armed forces under clause 1, section 2, article II of the Constitution, the President has authority to direct the conduct of military operations and, as an incident thereof, to organize the armed forces for combat. Such organization comprehends structuring those forces as between Active Forces and Reserve components and allotting missions between the two associated elements. This fundamental constitutional authority has been recognized by Congress in its recent enactment of the statute now codified at subsection 161(ap) of title 10, United States Code. This statute also formally authorizes the President to act through the Secretary of Defense in prescribing force structure.

Senator GLENN. Thank you.

COMPARISON OF ACTIVE AND RESERVE COMPONENTS

Mr. Duncan, your statement also concludes that, and I quote, "As a general proposition, flying units are less expensive in Reserve status than in the Active Forces." I would agree with that, but I am more concerned about another thing, and that is, the overall bottom line combat capability. Now, as was already pointed out here today, some of the flying units in the Reserves maybe do not have—are not able to cover all the same numbers of missions as the Regular squadrons do, because they are not capable in all of those different areas, but how would you assess the capability of flying units in the Active and Reserve components? Do we sacrifice capability—combat capability, when we move a tactical fighter wing from the Active to the Reserve components?

Mr. DUNCAN. Well, as General Boyd said, Senator, in the case of the Air Reserve components, and in fact, as a general proposition for all of the Reserve components, we train our reservists, and I speak of Guardsmen too, in that sense; we train our reservists to the same standards of performance as the Active Forces. But given the limited training time they have, we often train them on fewer tasks. So when you speak about Air Reserve components, for example, my personal view is that they are highly capable pilots. Typically, they are former, Active pilots who bring a great deal of experience to the job. Nevertheless, while they fly far more than the typical 39 days of training a year, they are not trained in 100 percent of the tasks that all Active pilots are.

Senator GLENN. Then if I asked, does a Reserve component tactical fighter unit, as an example, maintain the same capability and proficiency across the full range of missions that a comparable Active tactical fighter unit would be trained in, the answer you are giving me would have to be no, they do not maintain the same overall combat capability. Is that correct?

Mr. DUNCAN. I think the general answer would be no. But in this context, no. But when you ask the question, "what military capability is required for a specific mission?", and when we analyze that question on a mission-by-mission, case-by-case, unit-by-unit basis, we look for situations where the reduction of military capability, if there is one, is an acceptable reduction in view of the cost savings that might be made. In many cases, it is not. The reduction is simply an unacceptable reduction in military capability or flexibility.

But if it is an acceptable reduction for cost savings, and there are no other factors such as diplomatic, foreign policy, Alliance factors, and so forth, then that becomes a prime target for consideration of a change in force structure.

But there are numerous factors that go into this decision. I am not trying to be evasive, but each force mix issue is a much more complex issue than the simple question of what are the cost savings, and how much military capability is retained.

Senator GLENN. I agree with that. But I think too often we get in the habit of going the other way too far, too, and saying, well, we will just save money—we will transfer it to the Reserves. Let everyone be aware that when we transfer a unit to the Reserves, we are also probably saying that in the overall combat capability, if we really go to war to perform a number of missions—all the whole gamut of missions that a regular squadron might be required to perform—transfer to the Reserves—we are reducing that overall combat capability. Would you agree with that, General Boyd?

General BOYD. Yes, sir. That is absolutely correct.

Mr. DUNCAN. Senator, let me add one caveat. The Air Reserve components present a unique situation, because they are generally agreed to be so capable. As a general proposition, a transfer of force structure to the Air Reserve components may reduce military capability, but it may be a military capability that they can be trained to do in a very short period of time. It is a question again of what is the military capability that is lost? How important is it to the mission? How long does it take to train Reserve units to perform that mission? And those kinds of factors. But we are talking in generalities, so I agree with you as a general proposition.

NEED TO REEXAMINE TOTAL FORCE CONCEPT

Senator **Glenn**. No, I do not disagree if you are going to factor in training time and cost, and a lot of other things. What I was trying to point out was that we do not have the total force concept of who is going to be the ready forces, ready to go, right now, performing all functions required in combat.

Now, you take that, and you say, okay, we split this up between the Army and the Guard and the Reserves and the Air Force and the Marines, and everybody—the whole armed services. The total force concept was suppose to allocate these missions to everyone. We do not change around between these different military organizations without some loss, or some real change in combat capability. Which points up the need once again, I think, to reexamine that total force concept that we have not reexamined since it was originally put in in 1973, and the whole world-wide situation has changed dramatically since that time. We do not have it spelled out carefully. It is sort of a big amorphous something out there that everyone thinks is there, and I am not sure we are all well organized under it, and I think we ought to have a new look at the total force concept.

Mr. **Duncan**. Senator, we have communicated with Secretary Cheney and the Deputy Secretary about this on a regular basis.

Let me just say that while Mr. Berteau and I cannot point to a single piece of paper that comprehensively sets forth what the Total Force Policy is in all factual situations, I think there is very little doubt, not only about the policy, but how it is being implemented. And I would argue that while we can improve the process within the Department of Defense as far as coordination, I think it is very clear what the policy is, and that we are constantly reevaluating it as we go through the PPBS system.

Senator **Glenn**. Okay. But let me follow it up then. If we are evaluating it, and we have some of the shortages we have, why are we not doing something about it? We have not done it. I have been harping on this for 4 or 5 years, and I can give you some specifics.

Mr. **Duncan**. Yes, sir. I understand you can, and I am aware of those same shortages. I would argue that in recent months we have begun—I will cite one example.

There have been some glaring shortages in the Army Reserve components on training military skills and so forth. There has been some very good progress in recent months toward the resolution of the problems. There are still some shortages on resource allocation—equipment and otherwise, to early deploying units. We are making great strides in making sure that early deploying units receive the equipment. When you have scarce resources and huge commitments, you have to rely on certain management principles. For example, our "First to fight, First to equip" policy is an inherent part of the Total Force Policy. And we are doing a better job on implementing that part of the policy.

DEFICIENCIES IN COMBAT SERVICE SUPPORT UNITS

Senator **GLENN**. Okay. Let me give you some examples of what I am talking about. The Total Force concept says that 80 percent of combat medical will come from the Reserves. I do not quarrel with that. We are going to need a lot more medical in combat than we do in peace time. So that sounds logical on paper, except that we find out right now, if we went to war, that 80 percent is assigned to the Reserves, we are 71 percent short of doctors. That is 7,000 doctors short. We are 31,000 nurses short. That is 66 percent short. That is short now—that is not what we have in there. That is the amount that we are short, and we have not done anything about it. We have talked and we have talked and we have talked for about the last 4 years. Yet, those figures remain about the same.

We find that when we change the rating of Reserve units as to what is C–1, C–2, C–3—we are now up to C–5, I guess, we define these things in strange and wondrous ways under this new system. I just read them again this morning. And yet, 45 percent are not combat ready, and we have been talking about this for years.

Now, that is an improvement, because we were 55 percent, but then we changed our definitions to get down to 45 percent not combat ready. Basically, as we see it, because the units really have not changed that much. That is combat deficiency, and combat support, combat service support, and you get in the war games which I have been in, and you find out that when you have reached some of those things, people say, well, we will rely on host nation support.

You are not going to do that in a combat situation. You put any combat scenario together you can think about, and that is just head-in-the-sand type thinking if you think that we are going to be in the middle of Europe in a big fight, and for medical—instead of it being supported beyond that 2-to-3-week point that the Regulars are suppose to handle, you go beyond that point, and you are not going to have that. And you are going to say, host nation support and all of our wounded are going over to the Germans, or the French, or the British, or somebody else that has their own problems at the time.

We are not addressing these things. We have been talking about them for 4 or 5 years now. That is the reason I call for a reevaluation. I do not know what we do about this. But I know if it is broke, and it has been broken for a number of years, and we do not have those people, and the units are not combat ready, and the bottom line of all military is what we are going to do when we get to combat, we had better be fixing it. And nobody has been working on it over there. Maybe they have been talking about it. But we have not seen any correction for about the last 5 years that I have been talking about it personally.

Now, I do not know whether we have to put this into legislation this year in the authorization bill or what we will do with it. But somehow we have to answer these things or we are just living in a dream world as far as combat capability goes.

Mr. DUNCAN. Let me address the medical question, and I know this is not the main subject of your hearing today. But I just cannot let go, let it pass, that we are not addressing that problem.

I agree with you. I mean, I have been very candid about that particular problem. I have been outspoken about it. We do have major deficiencies in the Army's combat service support units. The numbers of 7,000 physicians, 31,000 nurses—I know you have talked about. But let me assure you, that is not a "Reserve" or a "Total Force" problem. We have simply decided and tried to estimate our casualty estimates for the kinds of conflicts we are likely to be involved in. Starting from the premise of what estimates we make on casualties, we seek sufficient numbers of physicians and nurses to take care of those casualties. We cannot bring into the Active Forces, for budgetary reasons, the numbers of doctors and nurses we would need for conflicts that have not occurred. So, as a matter of policy, the best way to proceed is to look to put those people in the Reserve Forces.

When you look at the Selected Reserve, there has been significant progress in recent years. But we cannot begin to put into the Selected Reserve all of the physicians and other medical personnel we would need—for example, for a general conflict on the plains of Europe. So we are looking at putting them in IRR. Several steps have been taken in recent months to that end. I would like to report that the problem has been fixed. It has not. But let me assure you that we are spending long days working on that problem, I think, with some prospect of success.

Part of the problem has nothing to do with the Total Force Policy. It is a fact that physicians and nurses just are not coming into the military services in the numbers that we need—both Active Forces and Reserve Forces. So we are exploring various ideas, such as changes in training requirements, not just financial incentives. Anything we can do to bring them in. Just recently I asked the Reserve Forces Policy Board to forget finances, to assume that we have no more money to spend, and to explore the way we do business with the physicians and nurses. I hope to have some good recommendations from the Board.

We do not have answers yet, but I can assure you that we are very aware of the problem. And we are working very hard to solve it. We are not going to solve it, I think, by readdressing Total Force Policy. I do not think that has much to do with this particular problem. We need to figure out—how we recruit into both Active and Reserve Forces—the kinds of physicians and nurses we need. But I do not think that this particular problem goes to the heart of whether or not the Total Force Policy is a wise policy. I think we are reevaluating that constantly.

Senator GLENN. Well, that's the reason I bring up Total Force Policy. The reason I bring it up under that title, however, is a fact that if it is not working, and we have not been able to fix it in about 4 or 5 years, we had better look at where they are going to come from. If they cannot come from the Reserves, we had better be making some other arrangement for training, putting in irregulars, make physicians' assistants—do something. Change ages, change this, change something, change where they are coming from that may not be in the Reserves. Maybe they come from a different source. Maybe put them in irregulars so it is part of total force concept, if it is not working right from an organizational standpoint. Thank you, my time is up.

Senator **Levin**. Thank you, Senator Glenn. Just a couple of quick questions.

NATO COST ESTIMATE TO MOVE BASE FROM SPAIN

First, to Ambassador Woodworth. You gave a total figure of $827 million as a NATO cost of the relocation of the base from Spain; $181 million of that $827 million is housing reimbursement costs, is that correct?

Mr. **Woodworth**. That is correct.

Senator **Levin**. And the United States is going to pay that cost over 10 years?

Mr. **Woodworth**. That is correct.

Senator **Levin**. And that is part of your $827 million?

Mr. **Woodworth**. The $181 million that NATO is going to spend up front, to build the housing, is part of the $827 million.

Senator **Levin**. Well, I think it is clear that that should be attributed to a U.S. contribution, because we are going to pay that over 10 years. Now, you can argue that it is an up-front NATO cost, but it is clearly going to be reimbursed by the United States. So I think it is a lot more accurate to say that our total contribution is $437 million of the $827, rather than $256 million of the $827. You reach a different conclusion, I guess, because it is an up-front NATO cost. But I think in the average taxpayer's mind—when we are paying that housing cost over the next 10 years back to the NATO funds, it is clearly a U.S. contribution.

Mr. **Woodworth**. But could I add one thing to that, though, and I agree. There is a distinction here, and this is—the housing cost comes out of this as kind of a unique variation in the total cost picture. But I think it is also fair to say that the money spent on the housing—that the United States would spend in the paying back NATO, is money we would spend anyway, assuming the wing still exists. Let us assume the wing remained in Torrejon and we were not leaving Spain. We would remain——

Senator **Levin**. No, the question, though, is whether or not that wing would go to Reserve status?

Mr. **Woodworth**. Well, okay. If it goes to Reserve status, you do have a different situation, to be sure. But looking at it in terms of the cost of the relocation of the wing versus what it costs, say, to be at Torrejon, certain things had to be paid for, and we have gone over that. In terms of money that is spent at Torrejon—in fact, what we will be spending for housing in Crotone in the repayment to NATO is less than what we spend for housing at Torrejon. So I think there is a difference here.

Senator **Levin**. You cannot count it two different ways. If you are going to make it part of the $827, which is part of the overall NATO cost, then the question is, who is bearing that cost for the purposes of figuring out the U.S. share? You cannot say it is part of the $827 for purposes of expenditures, but heck, we would have spent it anyway, so do not count it when you figure out the U.S. share. You cannot have it both ways. So I think that the accurate way to do it is the way I described. And in any event, since one of the possibilities which has been proposed is that it be made—returned to the United States and placed in a Reserve status—that clearly would be a different situation.

Mr. **Woodworth**. That would create a different situation on that particular one.

Senator **Levin**. Let me thank this panel. Do you want to ask any additional questions?

Senator **Glenn**. Just one. I know we have to move on, we are way over right now.

USAFE AIRCRAFT BASES

Under the 16th Air Force, which is what covers the Torrejon base, you also have what are called rotational USAFE aircraft bases at Aviano in Italy, and in Insirlik in Turkey. Were considerations given if the 401st came back, using those and deployable Reserve squadrons back and forth? It would in effect keep our NATO commitment but would make more of a flux force back and forth without someone being there full time. Was anything like that as sort of a compromise even considered?

General **Boyd**. Yes, sir, that was considered but rejected. The deterrent value of having that force in place—the operational consideration of having that force—the total 72 aircraft, total wing available, in very short response time, the full strike capability of that wing—in Europe, in the southern flank—all of that was more important to consideration of the CINC, the war-fighting CINC than sending it back home and only keeping a part of it over there.

F-16 BASES IN EUROPE

Senator **Glenn**. That was considered—was the option also to deploy them to existing F-16 bases in Europe and leaving them up there? Beef up those forces in place right now—was that considered?

General **Boyd**. There was a consideration, yes, sir. There was a consideration of putting them in the central region. Augmenting in the central region, or a part of—there were several—you know, there were many options we looked at. One was to put one squadron at Ramstein. To put two squadrons PCS to Aviano. There were operational considerations that clearly made that a bad choice. Peacetime, and I am covering operational considerations—I was the planner in USAFE at that time, sir, and I believe I can tell you that we had 100 different options that we looked at. And this is the eventual option that we came up with. It was the option that was best, sir.

Senator **Glenn**. Was this because of German sensibilities and so on, the low flying and all that across Europe?

General **Boyd**. The Germans were not anxious to have any more force structure there, yes, sir. That was one consideration. There are air space problems in Aviano for continuing peacetime flying considerations. You know, there were—there is just a host of operational reasons why this seemed the best choice, the best solution.

CREDIBILITY PROBLEM IN EUROPE

Senator GLENN. Well, I know that we are sort of the linch-pin in keeping NATO together as much as we can. But, earlier, someone mentioned about what would happen to U.S. credibility in effect. And I think there is a lot of a credibility problem in Europe right now. And a lot of lessened credibility in NATO right now, with the Germans walking away from their commitment on Lance and some things like that, that I am very concerned about too. And we do not want to be the reason for more unraveling of what already is going on over there. But on the other hand, we have our own economic considerations here, too, right now.

CONSIDERATION GIVEN TO LOCATING 401ST IN GERMANY

Senator LEVIN. On that last testimony of yours, General Boyd, are you saying that if the Germans did not have an air space problem, and that if there were room in Germany for that wing, that then we would have considered moving it from Torrejon to Germany?

General BOYD. Sir, I am saying that one of the options we considered at the time was putting one of the three squadrons in Germany.

Senator LEVIN. And it was just the air space problem and the training problem?

General BOYD. No, sir.

Senator LEVIN. Well, why did we not do it? The German Government did not want it? But my question is, if the German Government did welcome it, would we have put it there?

General BOYD. No, sir. Because ultimately——

Senator LEVIN. How did we look at it?

General BOYD. Well, we were trying to exhaust every option we could, and examine every option that we could think of. But, ultimately, the CINC preferred to keep that force structure in the southern flank. That was his war-fighting consideration—his operational consideration that that was the best choice. We never consulted the Germans. These were analytical excursions that we worked, and we worked every one we could think of.

Senator GLENN. You mean he would rather have it down in southern Italy, and not even available for immediate use, than he would have it up there, ready to go at a moment's notice?

General BOYD. That was CINCEUR's choice, sir. He needed that anchor, if you will, on his flank. That is the only U.S. wing he has there. That is the only U.S. force tactical air force-structure that he has in the southern flank. Now, he has it on a very short string——

Senator GLENN. But they are not a combat unit.

General BOYD. Yes, sir.

Senator GLENN. Well, as I understood it, they would not have all their war reserves, and everything there, ready to conduct combat out of that base at all. They would have to go someplace else to base.

General BOYD. Not out of Crotone.

Senator GLENN. All they are going to do is use that for home porting.

General Boyd. They forward deploy.

Senator Glenn. Why not base there then?

General Boyd. Well, those are a whole host of other considerations in terms of negotiating such a bed-down with——

Senator Levin. We better save that for a different hearing.

General Boyd. Yes, sir.

Senator Glenn. I understand we are getting into some touchy areas here.

General Boyd. I will be happy to talk to you in a closed session on that, though, sir.

GLCM UNITS IN EUROPE

Senator Levin. Mr. Berteau, one housekeeping matter having to do with the GLCM units in Europe. The Air Force had about 8,250 military personnel assigned to the GLCMs in Europe. The Air Force plans to assign 4,350 of these personnel spaces for other missions, including air base defense, medical support, and the relocation of the 401st, among other things. My question is, what is happening to the remaining 4,000 Air Force troops assigned to GLCM units, and does the Air Force plan to reassign the remaining approximately 4,000 GLCM troops to other missions? And if so, where?

Mr. Berteau. Those remaining end strength were taken out of the force structure. And that is——

Senator Levin. What is the force structure?

Mr. Berteau. Yes, sir. We took the savings and took the billets. That is part of the reduction reflected in the 1989, as well as the 1990 budget. We took some of that in advance 1989. And we did a similar thing with the Army this year.

Senator Levin. Thank you. This panel has been very helpful.

We will call our final panel to take their seats. Our final panel consists of Maj. Gen. Roger Scheer, Chief of the Air Force Reserve, and Brig. Gen. Philip Killey, Director of the Air National Guard. Secretary Duncan, you are welcome to stay or leave as you wish. It is entirely up to you. Welcome, General Scheer.

STATEMENT OF MAJ. GEN. ROGER P. SCHEER, CHIEF OF AIR FORCE RESERVE, HEADQUARTERS, USAF

General Scheer. Thank you, sir. It is a pleasure, Mr. Chairman, to be in front of these distinguished subcommittees. I would like to offer just a very brief opening remark.

Today, out of the 400 and some odd units that we have reporting under the combat readiness reporting system, only three are not combat ready. That is obviously less than 1 percent. And of those 400 and some units, 81 are medical units. All three of the units that are not combat ready are medical units, one of which will be combat ready by the end of this month and the remaining two by the end of the summer. Overall, in the medical area of the approximately 9,700 personnel who are authorized, we have approximately 9,600 assigned.

The degree of readiness that we have today has been due a great deal to the support from Congress and the Air Force. And certainly some of the unsung heroes in this are our employers who are letting our people off for certainly a lot more than their minimum training requirements.

We do have, obviously, challenges in the future to bring all of our units to the very highest readiness levels. We need to continue our modernization. We need, perhaps more importantly, to find new methods of training our non-flying people, particularly maintenance and logistics engineers. We know the requirements in the future will not decrease. We also know the availability of our people is about stretched to its maximum. So we need state-of-the-art training, to which we are putting a lot of emphasis.

Finally, in the long term, we will need relief for our full-timers. Our full-time support at unit level is provided via the technician program. With the erosion of civil service pay as a function of either military, and/or civilian sector pay, we are looking for ways that we can guarantee attracting highly qualified full-timers in the future. With that, sir, I will end my statement.

[The prepared statement of General Scheer follows:]

STATEMENT OF: **MAJOR GENERAL ROGER P. SCHEER**
Chief of Air Force Reserve
Headquarters, USAF

MISTER CHAIRMEN AND MEMBERS OF THE COMMITTEE:

Thank you for the opportunity to appear before this Joint Subcommittee and share with you the current status of the Air Force Reserve, the challenges we face, and the accomplishments we have made during the past year. Our Reserve units are combat ready. They can be mobilized in 24 hours and deployed within 72 hours. In Fiscal Year (FY) 1988 we made significant improvements to the quality of our training and today are at the highest level of readiness in our history, with 97% of our units (excluding those in conversion) designated combat ready. This is up from 71% just 4 short years ago.

These readiness levels are a result of a team effort: The Congress, the Air Force, and the Reservist. By providing modern equipment, substantive missions and realistic training opportunities, the Congress and the Air Force have given the quality personnel of the Air Force Reserve the means and motivation to achieve these high levels of combat capability.

This next year presents a difficult fiscal challenge for our country and especially for the military establishment. In light of hard-hitting budget limitations, we must not allow current high readiness levels to erode. We can't let the gains of the past years slip away. Much has been written and spoken recently concerning major restructuring of the United States Air Force -- specifically, the increased transfer of missions to the Air Reserve Forces. We think the current force mix is about right. It provides an adequate pool of trained personnel to the Reserve forces without which we would be unable to maintain current readiness levels. If the Reserve forces were to significantly expand at the expense of active force levels, this pool of trained personnel would diminish to the point where, at some future date, it could be inadequate to meet Reserve manpower requirements. The untrained would then have to replace the trained, thus raising training costs and reducing readiness. Perhaps some fine tuning of the existing force is prudent, but we must not create the false perception that this country can be defended solely by a Reserve force.

To meet the demand of providing the strongest defense for the dollar, we must continue to attract and retain highly qualified, motivated people who demonstrate pride in their performance. At the same time, we must acquire the modern equipment and provide realistic training environments that will effectively challenge and use the talents of today's Reserve professionals.

PROGRAM CHANGES

Equipment Modernization

The primary goal of the Air Force Reserve is to sustain a superior combat ready force. Today, the Air Force is making great qualitative strides in this effort by providing our flying units with some of the newest, state-of-the-art aircraft in America's arsenal. The support Congress has given the Air Force has made these modernization efforts possible. We will do everything possible to ensure that the capabilities of these weapons systems are fully exploited.

We are continuing to upgrade our tactical fighter force in FY 1989 with the conversion of the F-4 units at Tinker AFB, Oklahoma and Homestead AFB, Florida to the F-16 aircraft. However, budget constraints and delays in upgrading active units to newer F-16C/Ds have slowed modernization of our fighter force at other Reserve locations. We now plan to complete F-4 unit conversion to F-16A/B at Wright-Patterson AFB, Ohio in early FY 90 and will similarly convert Carswell AFB and Bergstrom AFB, Texas in late FY 91. Any further reduction in planned active duty F-15 and F-16 procurement levels will extend our aging F-4s seriously affecting our war fighting capability.

This continuing modernization of our tactical fighter force with the F-16 brings a corresponding challenge to the Reserve as we prepare to meet the anticipated threat well into the 21st Century. We must now address the midlife upgrade of this aircraft while ensuring commonality with the active Air Force and our allies. We coordinate our efforts with the Air Force and NATO as an active member of the Multi-national Fighter Program.

The Air Force Reserve will retire its last C-130A tactical airlifter this year. The only C-130As remaining in the Reserve after this year are the dated gunships at Duke Field, Florida. The active Air Force procurement of the new AC-130U will release upgraded H-model gunships to replace those A-models. This replacement is critical as these 30-plus year old AC-130As offer only limited capability to the increasingly important special operations mission.

In the past year we acquired an increased strategic airlift capability at our unit-equipped C-141 and C-5 wings. The 459th Military Airlift Wing (MAW) at Andrews AFB, Maryland is fully converted to eight C-141B aircraft and the 433rd MAW at Kelly AFB, Texas completed its conversion from 16 C-130Es to 15 C-5As assigned as of December 1988. This year the 439th MAW at Westover AFB, Massachusetts has received the remainder of its 14 C-5s. We will continue this effort by replacing eight C-130E model aircraft at Rickenbacker ANGB, Ohio, with 12 C-141Bs, beginning in FY 91.

These unit conversions allow us to operate and maintain valuable strategic airlift aircraft economically at a low peacetime tempo while maintaining a high wartime surge capability.

Another important airlift enhancement is the C-17A. The development of this aircraft will ensure a quantum leap forward for our nation's airlift capability. Its timely acquisition will provide a critical improvement in the ability of the Air Force to project conventional forces wherever they might be needed. As I indicated in my testimony last year, this is the first time in MAC's history that a production line strategic airlift aircraft is scheduled for a unit-equipped Reserve organization. Any stretching out of this program will have a ripple-down effect on overall Air Force Reserve modernization efforts. Delays in the delivery of C-17As to active units slow the subsequent transfer of their resources to and between Reserve units. We strongly urge this important program be kept on track.

We have been a full partner with the active Air Force in direct support of the strategic mission. Our KC-135E aerial refueling units at Grissom AFB, Indiana, and March AFB and Mather AFB, California will each receive 2 additional aircraft late in FY 90. This is the result of the deactivation of an active KC-135 unit. Congress has provided the funds to upgrade these KC-135As to the KC-135E configuration with the attendant significant increase in capability. The addition of these six aircraft will allow the Air Force Reserve to provide three added lines of alert.

Perhaps the Air Force Reserve's greatest challenge is to provide our personnel with state-of-the-art training programs. We must be able to meet the inevitable increase in future readiness goals without adding to our Reservists' already over-burdened participation requirements. These new programs include self-paced programmed instruction, part-task trainers, multi-media learning programs, and computer simulation. Congress has generously supported our past training requirements and we look forward to your continued support in the future.

Shortfalls

Our ability to successfully operate in a hostile environment remains one of the Air Force Reserve's highest priorities. To achieve this goal, we are buying electronic countermeasures pods for our fighters and defensive systems for our airlift force, made possible through the miscellaneous equipment funds provided by the Congress. Without this critical equipment, our tactical fighter and airlift units lack the capability to penetrate enemy defenses and survive.

This upgrade has been a very slow process. Our current program includes funds for only one-fourth of our fighter defensive system requirements. We must aggressively continue our efforts in this area if we are to provide our air crews creditable survivability.

Our tactical airlift aircraft may face the same hostile environment as our fighters. Today we are installing the first defensive system on a Reserve C-130 at Dobbins AFB, Georgia. This prototype is expected to demonstrate that a cost effective, off-the-shelf system can provide adequate, timely protection against most threats to our tactical airlifters. The importance of this effort cannot be understated. In December, while on a humanitarian aerial spray mission, two commercially chartered DC-7s were attacked in North Africa by heat-seeking missiles. Our C-130s, operating daily in Central and South America, could face a similar terrorist threat. We will continue a concerted effort to provide our crews the protection needed to complete their peacetime and wartime missions.

MANPOWER

As the members of this committee are aware, the Air Force Reserve has experienced significant mission growth over the past decade and a half. You have made this possible by providing the end-strength required to meet the associated wartime and contingency tasking responsibilities. The Air Force Reserve end-strength grew to 82,116 in FY 88, a total that has nearly doubled since 1973. Simultaneously, however, the ratio of full-time support (civilians and Air Reserve Technicians) to Reserve unit end-strength actually declined from 25 to 20 percent. Budget restrictions have prevented full-time support and management requirements from keeping pace with Reserve end-strength increases. Additionally, the Goldwater-Nichols DoD Reorganization Act imposed growth restrictions on Reserve management headquarters. The combination of these two factors jeopardizes our ability to provide adequate support to our field units in the face of increasing readiness requirements.

Personnel Legislation

In the area of legislation, recent Congressional action has had a significant, positive effect on retention and the quality of life of our force. Last year's extension and enhancement of the Montgomery GI Bill is but one of those important pieces of legislation.

However, the progress of one legislative proposal was not as successful. Specifically, the Reserve Officers Personnel Management Act (ROPMA) was introduced to the 100th Congress with no resultant legislation. When Congress initiated the Defense Officers Personnel Management Act in 1981, it directed similar legislation for the Reserve components. We ask that you consider and adopt the major provisions of ROPMA when it is submitted again during this session.

Recruiting and Retention

The Reserve recruiting structure continues to achieve exceptional results. Our Air Force Reserve Recruiting Service is unique as it maintains its own offices collocated with Reserve units across the country, targeting a primarily "hometown" market. This "organic" recruiting structure is essential to the Air Force Reserve if we are to successfully meet future requirements.

Our recruiters are finding an extremely high caliber of people: 99 % of our non-prior service enlistees are high school or equivalent graduates while 77% of all recruits are trained, prior service members. Retention is also up in FY 88. We had a reenlistment rate of 87% for non-prior service and 92% for our prior service members. Continued improvement in this area is a major goal for 1989.

This recruiting and retention success, combined with our high participation rate - 98% for officers and 95% for enlisted members in FY 88 - allows us to maintain a motivated, top quality force. Perhaps one of the best examples of this quality force was the selection of CMSgt Roy Arakaki as one of the 12 Outstanding Airmen of the Year in the entire Air Force for 1988. A chief of loadmaster standardization and evaluation at the 445th Military Airlift Wing (MAW), Norton AFB, California, Chief Arakaki is a shining example of the citizen airmen who make up the Air Force Reserve.

While we have had significant recruiting successes, I would be remiss if I did not point out the difficulty we are facing in our Air Reserve Technician (ART) manning. The Air Reserve

Technician continues to be the backbone of our Reserve unit program. Unfortunately, ART recruiting has lagged over the past five years, primarily because Civil Service compensation has fallen far behind the private sector. With the continuing high-level of airline hiring, we anticipate this situation will only get worse -- especially in our pilot and aircraft maintenance areas.

Medical Readiness

The Air Force Reserve has made consistent strides in medical readiness and our manning in this area continues to improve. Again, we owe a great deal of this success to strong Congressional leadership and support for medical recruiting and retention. Our medical stipend program is operational, and we expect it to help fill critical physician vacancies. By raising the maximum age for initial medical appointment and the maximum age for retirement, we are now able to recruit to a broader physician base. Additionally, the accession bonus program for critical skills will be operational by 1 April. To take full advantage of these tools, we plan to increase the number of dedicated medical recruiters.

As I reported last year, in response to the 1987 Defense Authorization Bill, we continue to expand our involvement in the Combat Casualty Care Course (C-4) and readiness training for all medical disciplines. Our efforts are aimed at offering well qualified medical professionals purposeful and applicable training. On the down side, however, we have only 88% of the physicians and nurses we need -- a shortage of approximately 90 and 260 respectively. We are confident that existing incentive and bonus programs will help us to meet our physician goals, but the outlook for nurses is cloudy. Although the Reserve is having difficulty competing with opportunities provided by the private sector, we are leaving no stone unturned in our effort to reverse this situation.

Exercises

The Individual Ready Reserve (IRR) is a manpower pool of individuals who have had previous military training (either on active duty or in the Selected Reserve) and have a remaining military service obligation. These members are not assigned to units and have no participation obligation. However, they may voluntarily participate in certain types of training.

In order to assess this manpower resource, the Secretary of Defense mandated the services to order IRR members to one day of active duty each year during the period of FY 1987-1992. In 1989, we plan to conduct this screening in a manner similar to the actual process that would be used during mobilization. Under this concept, we will identify selected members of the IRR with critical specialties and move them to a technical training center for processing. We will then evaluate their skill retention, identify follow-on training requirements, and simulate assignment actions based on anticipated manning requirements. This test will provide an excellent assessment of the actual backfill capability of this important mobilization resource.

We test our units as well to determine their capabilities. Last year the Air Force Reserve played a significant role in both Joint Chiefs of Staff (JCS) and Air Force exercise programs. Not only did 44 of our 58 flying units participate, but so did 172 combat support and combat service support units. Perhaps less visible than the flyers, our aerial ports, aeromedical and medical, enroute maintenance, communications and engineering teams truly make these exercises meaningful and realistic. Over 30,000 Reservists participated in FY 88 exercises which included VOLANT

OAK and AHUAS TARA in Central America, DISPLAY DETERMINATION in Europe, and TEAM SPIRIT in the Pacific.

OPERATIONAL ACHIEVEMENTS

Air Force Reserve flying units logged more than 223,000 hours in FY 88, flying unit-equipped and associate strategic airlift, tactical airlift, fighter, rescue and tanker aircraft. Our flying is not limited to local training missions. In quantitative terms, the by-product of our world-wide Reserve contribution to MAC is impressive. MAC-gained units flew in excess of 140,000 hours in FY 88. Our Reserve tactical airlift was responsible for deploying 32,000 troops (airdropping 16,000) and 4,000 tons of cargo (airdropping 500 tons). We continue to play an important role in REFORGER in Europe. Reserve crews and aircraft were even called upon to transport Intermediate Nuclear Forces (INF) Treaty verification teams to Moscow.

The Air Force Reserve, in conjunction with the Air National Guard, continues to maintain a year-round rotation in Panama in direct support of United States Southern Command (USSOUTHCOM) with six C-130s, seven aircrews, and 60 support personnel. Last year VOLANT OAK crews flew 331 missions carrying over 10,000 passengers and over 2500 tons of cargo. A significant portion of this effort was in support of USSOUTHCOM's "Good Neighbor Programs."

In the area of competitions, a Reserve crew commanded by Lt Col Ken McKibban was selected as the "Best KC-10 Crew" during the 1988 SAC Bombing and Navigation Competition. Assigned to the 452nd Air Refueling Wing (AREFW), March AFB, California, the crew amassed an impressive score of 98.55 out of a possible 100 points.

In March of last year, a Reserve crew from the 459th MAW, Andrews AFB, Maryland, responded to an urgent request to support the deployment of the 82nd Airborne Division into Honduras. This Reserve crew, commanded by Major Tom Carter, flew the first aircraft into Palmerola Air Base, Honduras, in support of JCS Exercise "GOLDEN PHEASANT."

Crews from six Reserve units supported a critical UN Peacekeeping deployment to Iraq in August of 1988. Known as "OPERATION POST ROAD," we lifted 316 tons of cargo and 170 passengers during this deployment.

In conjunction with proficiency training, our flying units are often requested to provide a variety of humanitarian services. Air Force Reserve units were credited with saving 49 lives in FY 88 while performing over 100 search and rescue missions. During 1988, we transported over 880,000 pounds of humanitarian relief supplies, including 66,000 pounds of life-saving cargo to Jamaica after last year's devastating hurricane.

Most recently, Reserve crews from, Andrews AFB, Maryland, Westover AFB, Massachusetts, and Kelly AFB, Texas were instrumental in flying emergency missions to support the Armenian earthquake relief effort. Our crews became ambassadors of goodwill as they provided vitally needed supplies to survivors of this tragedy.

When we think of the Air Force Reserve, we normally focus on our unit program. It is important to remember that we also have over 12,000 highly trained Individual Mobilization Augmentees (IMAs) who work directly with their active duty counterparts. As but one example of the contributions these IMAs make, the Air Force Systems Command has documented over $178 million in cost savings since 1982 directly attributed to the efforts of their assigned IMAs.

Unique Reserve Missions

The Air Force Reserve has several unique missions. We provide 100% of the DoD fixed-wing, large area aerial spray capability. Additionally, along with the Air National Guard, we provide 100% of the Air Force augmentation to the airborne fire fighting effort of the US Forestry Service. In support of this mission, the 943rd TAG from March AFB, California dropped over 498,000 gallons of fire retardant during 166 missions as they helped firefighters battle the raging forest fires in our western states this past year.

APPROPRIATIONS

The Air Force Reserve is programmed for 177 mission support and 58 flying units in FY 90. The Air Force Operation and Maintenance (O&M) appropriation provides for the day-to-day operating expenses of Reserve bases and units. It includes civilian personnel pay, aviation and ground fuels, depot maintenance, real property maintenance, and supplies. This appropriation decreases in FY 90 by $64.1 million, a program reduction of 7.5%.

The O&M increases in FY 90 occur primarily in F-16 Tactical Fighters ($17 million), KC-135 robusting ($3.2 million), and price growth ($16.6 million). Major program reductions include C-130 Tactical Airlift (-$9.7 million); C-141 associate proficiency sortie flying hours (-$7.5 million); C-5 associate proficiency sortie flying hours (-$6.7 million); and civilian workyear levels and contract funding for maintenance and repair of facilities (-$12.3 million). The depot maintenance program drops $33.8 million while base operating support funding decreases by $2.1 million.

The Reserve Personnel, Air Force (RP,AF) appropriation provides for the pay and allowances of Reservists during training, while performing special tours of active duty, and while in school. It also includes funding for full-time Reservist support of the Reserve program as well as students participating in junior and senior Reserve Officer Training Corps (ROTC) programs and the Armed Forces Health Professions Scholarship program. This appropriation increases by $14.3 million in FY 90.

The RP,AF increases in FY 90 occur primarily in pay raises ($21.7 million), support for F-16 aircraft ($10.1 million) and support for KC-135 robusting ($2.5 million). Decreases occur primarily in revised retired pay accrual rates (-$46.9 million)

As a final observation on appropriations, the FY 90 budget request significantly reduces funding for military construction. Until the last few years, this program was considerably underfunded and did not allow for timely replacement and/or repair of World War II facilities. Although we are receiving our fair share to meet current construction requirements, we are not able to address the considerable backlog of facility requirements that resulted from previous shortfalls.

CONCLUSION

In summary, the combat readiness and war fighting capability of the Air Force Reserve are vital elements within the Total Force. Modernization and readiness training continue to be our primary concerns as we strive to maximize our ability to defend this nation during a time of reduced defense spending.

We are proud of what we have accomplished in 1988. We owe a special vote of thanks to our families and employers who supported the men and women of the Air Force Reserve and made their achievements possible. We heartily acknowledge the combined efforts of the Reservist, family, and civilian employer which enable us to provide our services to the Air Force and to our country. Without this teamwork, the absences from home and office, attendance at frequent training activities, and all-hour availability would be impossible to endure. Finally, the superb support Congress has seen fit to provide to Reservists, their families, and employers is essential, reassuring, and gratifying. I remain confident this momentum will prevail in the 101st Congress.

This concludes my prepared statement, Mister Chairmen. I am ready to respond to your questions.

Senator LEVIN. Thank you, General Scheer. General Killey.

STATEMENT OF MAJ. GEN. PHILIP G. KILLEY, DIRECTOR, AIR NATIONAL GUARD, HEADQUARTERS, USAF

General KILLEY. Thank you, sir. I would just like to make a brief comment on the overall readiness of the Air National Guard as it exists today. The Air National Guard is unquestionably at the highest state of readiness in its history. All of our units are combat ready, except those units that we have right now in conversion, upgrading to more modern weapons systems. As for our flying units, 95 percent are either C–1 or C–2. In our mission support area, our non-flying units, approximately 90 percent are C–1 or C–2.

Our inspection record, conducted by the U.S. Air Force with the same standards of the U.S. Air Force, is the best inspection record that we have ever had. In 1988, 100 percent of all our units passed their inspections. There were no unsatisfactory ratings; 70 percent were either excellent or outstanding ratings. And I can tell you now, in fiscal year 1989, that we are doing better than what we were doing in 1988.

When you look at readiness it is an equation of people, equipment, and training. And when you look at people we have the best people we have ever had—the smartest, most goal-oriented, and most committed. We are able to maintain our program strength. Right now we are sitting at 99.6 percent of our program strength and have no doubt that we will make our program strength for 1989.

In the equipment area, thanks to Congress and to our Air Force, we have the most modern equipment that we have ever had. We have the same basic equipment that our Active-duty counterpart has in the F–15, F–16, C–141, C–5, and C–130H. Our combat communications equipment is rapidly being upgraded. Our equipment is, unquestionably, the most modern we have ever had.

I think training is the most important part of the equation. We have the most realistic and demanding training we have ever had. It is certainly worldwide, as we have been incorporated into the war plans of the United States Air Force. We train where and how we will fight.

I would like to mention, however, that we do have some readiness shortfalls that I would just briefly like to highlight for you. On the equipment side of the house, we still have C–130A/B-type aircraft in our inventory which are very difficult to sustain. We have supportability problems with those model aircraft and we need to get them out of the system. Even though the F–15 aircraft is a state-of-the-art airplane, most of the airplanes we are getting are an average of 14 years old. We need to upgrade those with what we call the Multi-Stage Improvement Program ~~to make~~ them compatible with our Active component aircraft and also capable of defeating the threat.

With our F–16 fighter aircraft, we need some survivability upgrades. Those also are not brand-new aircraft. They need to have modifications made so they can counter the threat accordingly.

As General Scheer said, even though we are in excellent shape with our strength and our people programs, we do have some erosion in our full-time support program. We are not fully manned. We are only at 91 percent of our authorized strength on our full-time side of the house.

We have AGR, full-time people, and we have technicians. We have an AGR grade-ceiling authorization problem that is causing us career-type problems in that program. We have people who cannot be promoted and, therefore, cannot make a career of 20 years or more in the AGR program. If we get the grade relief that we requested this year, we should be okay.

On the technician side of the house, the same problem exists. In some parts of the country where the pay scales are high and unemployment is low, our pay and benefits have not kept pace. We need to address that problem. We do not have anything in legislation yet this year that will correct that. However, we are looking at it hard, and plan to have a total plan of attack on how to solve that problem by next year.

Thank you, sir.

[The prepared statement of Major General Killey follows:]

STATEMENT OF: MAJOR GENERAL PHILIP G. KILLEY
DIRECTOR, AIR NATIONAL GUARD
HEADQUARTERS, UNITED STATES AIR FORCE

AIR NATIONAL GUARD

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, as the newly appointed Director of the Air National Guard (ANG), I am pleased to have the opportunity to appear before this committee and report to you on our status.

The Air National Guard is unique among the world's reserve military air forces in that we perform both a state and a federal mission. We provide the states with a disciplined force trained and equipped to protect life and property during natural disasters, civil disorders and other emergencies; we also provide the nation with an effective, economical military force for the national defense. The continued modernization of our aircraft and equipment is essential in maintaining the high standards we have established in performing these dual missions.

STATE MISSION

The State mission of the Air National Guard is to provide assistance to civil authorities during periods of domestic emergency. During FY 1988, 500 Air National Guard men and women expended nearly 5,800 workdays performing missions involving humanitarian support following natural disasters, search and rescue operations, airborne fire fighting support, emergency power and water supply, and evacuation of critically ill or injured persons.

In response to a Congressional mandate, the Air National Guard supported federal, state, and local law enforcement agencies in the war against drugs. This support, conducted primarily during scheduled training, included radar and visual surveillance of suspected drug trafficking aircraft and vessels, air transportation of law enforcement officials, and the loan of specialized equipment.

FEDERAL MISSION

Our Federal mission is to train combat flying units, combat support units, and the personnel needed to support wartime requirements. As a full partner with the Air Force, we perform operational peacetime missions at home and overseas that are compatible with our training and mobilization readiness objectives. We train to fight and win.

As an integral part of this Nation's Total Force, we maintain readiness through diligent peacetime training in all aspects of our wartime missions. Under the Total Force policy which integrates the active duty, National Guard, and reserve components into a single military force, America places increasing reliance on the Air National Guard in meeting national defense objectives. An indication of this greater reliance is found in the proportion of the FY 1990 force structure entrusted to us:

Tactical Fighters: The Air National Guard will provide over 24% of the Air Force's tactical fighter assets in FY 1990 ranging from the F-4 Phantom to the F-15 Eagle and the F-16 Fighting Falcon. Of the thirteen A-7D squadrons, three are equipped with low altitude night attack (LANA) capability.

Strategic Interceptors: The Air National Guard is the primary partner in aerospace defense, and will be supporting over 90% of the Continental United States peacetime alert in FY 1990. Our forces will account for 21 of 23 continental air defense alert locations, providing the North American Aerospace Defense Command (NORAD) its core fighting force. Additionally, peacetime air defense forces are provided to NORAD by Louisiana ANG F-15s, and to Pacific Air Command by Hawaii ANG F-15s helping to defend America's southern and western flanks.

Tactical Reconnaissance: The Air National Guard RF-4C reconnaissance force makes up 49% of the total Air Force tactical reconnaissance capability.

Tactical Air Support: Approximately 42% of the Air Force's tactical air support will come from Air National Guard OA-10 and OA-37 squadrons. Additionally, we will provide three air support operations centers, 60 tactical air control elements, and 40 air liaison officers to priority Army Guard and Reserve maneuver units.

Tactical Airlift: With 36% of the total tactical airlift forces, the Air National Guard will continue to provide substantial airlift support, including joint airborne/air transportability training; airdrop and airland delivery of troops; equipment and supplies; as well as a tactical aeromedical evacuation capability.

Strategic Airlift: One Air National Guard C-141 unit and one C-5A unit continue to provide a significant contribution toward meeting the strategic airlift requirements of the Air Force.

Aerial Refueling: The 13 Air National Guard air refueling units with 118 KC-135s comprise 19% of the Air Force's air refueling assets. Capable of immediate response to tasking, 19 tankers are on alert prepared to support Strategic Air Command's Single Integrated Operational Plan (SIOP).

Aerospace Rescue and Recovery: Three Air National Guard combat rescue units make up 23% of the Air Force rescue and recovery capability. Our newest unit, the 210th Aerospace Rescue and Recovery Squadron in Alaska, will possess four new MH-60G helicopters and two HC-130 tankers. The other two units, also modernizing with the MH-60G helicopters, support the space shuttle program as a unique part of their rescue mission. All three units train for war while providing peacetime rescue and recovery for both military and civil emergencies.

Operational Support Aircraft: The Air National Guard's Operational Support Aircraft (OSA) fleet is wartime tasked. OSA operate in peacetime as an integral part of the Military Airlift Command's (MAC) support airlift system.

Electronic Combat: We continue to upgrade the electronic combat capability of the eight EC-130E aircraft assigned to the Pennsylvania Air National Guard.

FLYING UNITS

With over 1,700 aircraft, Air National Guard flying units perform a variety of missions throughout the spectrum of Air Force missions. Our 91 major flying units are listed by mission area in Table 1.

While the structure of our flying units remains stable at 24 wings and 67 groups, over one third of our units will undergo aircraft modernization by the end of FY 1991. In addition, several units will assume new roles or missions. Table 2 lists those ANG units which will change their assigned aircraft forces during the fiscal year indicated.

MISSION SUPPORT UNITS

The combat effectiveness of the Air National Guard flying mission is directly dependent on the mission support provided by the non-flying units. We have 283 geographically separate or separately deployable units which provide communications, weather, and civil engineering support to the active Air Force, Army, and reserve components. An additional 307 units are collocated and integrated with our flying units to provide primarily medical, security, and aerial port support. Table 3 shows our current mission support units.

We are undertaking a medical service expansion in response to the second echelon (2E) requirements. The 2E is the first opportunity for battle casualties to receive medical care. This care, primarily stabilization, will return wounded soldiers to duty or prepare them for evacuation to the next higher echelon of support where definitive medical/surgical intervention will be available. Our 67 medical units that are identified with second echelon (2E) tasking represent 48% of the total force 2E capability in event of full mobilization. The cornerstone of 2E medical treatment is the Survivable Collective Protection System - Medical (SCPS-M). The Air Force Surgeon General provided the medical service of the Air National Guard with the prototype model of the SCPS-M, a state of the art medical readiness training platform currently located at the Air National Guard Field Training site in Alpena, Michigan. The SCPS-M is in place and should be prepared (with full-time training personnel) to receive incoming 2E tasked Air National Guard and Air Force Reserve medical units this summer. This Air National Guard asset is one of only two that will be located within the Continental United States, attesting to the active force confidence in our medical service. Fifteen medical and ten aeromedical evacuation units deployed a total of 791 personnel to overseas locations during FY 1988. These deployments were in response to Joint Chiefs of Staff exercises, major command taskings and overseas annual training initiatives locations in Europe, Korea, Honduras, and Africa.

Our 98 civil engineering (CE) units - specifically four civil engineering heavy repair (RED HORSE) units, three major command/numbered air force staff augmentation flights, and 91 civil engineering squadrons - are trained and equipped to accomplish such tasks as wartime theater construction management for rapid runway repair, force beddown and base recovery, and major heavy repair. Civil engineering squadrons receive "Base Recovery After Attack Training" at Eglin AFB, Florida. Peacetime alteration and repair projects at locations throughout the world sharpen wartime skills and result in the completion of urgently needed projects for both active and reserve component units.

An important part of our support comes from our 154 service elements, trained to provide the vital wartime services of billeting, food service, laundry, and mortuary affairs. They participate in many Continental United States and overseas field exercises.

Forty-four independent combat communications units are equipped and staffed to support the Defense Communications System, Tactical Air Forces, Special Operations Command, Central Command, and the Joint Task Forces. They are tasked to provide specific communications service to deployed commanders and terminal air traffic control facilities.

We have 30 tactical control units (3 groups, 9 squadrons and 18 flights) operating mobile radar control and reporting centers in addition to providing forward air control posts. These rapid reaction units are a critical link in the war against drugs.

Nineteen engineering installation (EI) squadrons are equipped and trained to install, relocate, remove, restore and accomplish on-site depot level maintenance on radars, antennas, cable plants, radios, teletype, and communications centers. These units represent a significant part of the total Air Force capability and each year accomplish a major portion of the total Air Force peacetime EI work load.

We have three aircraft control and warning squadrons and one detachment which provide air surveillance radar coverage and aircraft control capability for Hawaii and Puerto Rico. The Hawaii Regional Operational Control Center (HIROCC) is operated and maintained completely by Air National Guard personnel and performs the air defense surveillance mission for the Hawaiian Islands.

Three new communication squadrons have recently been activated in direct support of the North Atlantic Treaty Organization (NATO). The NATO Air Base Squadrons (NABS) provide survivable and reliable voice and teletype communications, primarily for command and control as well as logistics in the Central European Theater of Operations. This communication system is a joint United States Air Force and NATO program.

Our 23 aerial port units are equipped, trained, and ready to perform sustained operations in either a mobile environment supporting air-land operations in high threat areas with non-fixed air terminals, or in a strategic role supporting airlift operations at established airfields. Each mobile aerial port possesses its own communication, vehicle maintenance, joint airdrop, and self-defense capabilities and is capable of deploying as a self-contained unit.

We recently broke ground for the Congressionally approved construction of new facilities at the I. G. Brown Air National Guard Professional Military Education Center (PMEC) at Knoxville, Tennessee.

This Center continues to provide outstanding training for the men and women of the Air National Guard, Air Force Reserve, and the United States Air Force. Last year the PMEC trained approximately 3,000 people, half of whom were Non-Commissioned Officers essential to the Air National Guard's ability to remain ready. Another 1,000 were trained in their specialty or functional areas, thereby contributing directly to a more cost effective and mission efficient Air National Guard. The remaining students entered the ANG officer corps to begin service as the future leaders of our force. They represent our investment in the Air National Guard's future, for they will become the senior leaders of the 21st century. We are proud of the accomplishments of PMEC and recognize its value to both the military and the civilian communities of today's citizen airman.

In addition to PMEC, we are starting a Professional Continuing Education Center (PCEC) at Knoxville. It will provide information systems training for all our personnel.

Our remaining mission support units consist of security flights and information support flights at flying units, state headquarters elements, field training sites, airlift support detachments, and weather units. These elements fully complement the flying missions.

Like their flying unit counterparts, mission support units contribute heavily to the total Air Force combat capability. At the end of FY 1990, the Air Guard will maintain 83% of tactical control forces, 69% of engineering and installations forces, 67% of the aircraft control and warning forces, 67% of the Air Force combat communications forces, 26% of the civil engineering forces, 24% of authorized aeromedical evacuation crews, 14% of the weather reporting and forecasting forces, and 13% of aerial port forces.

MORE THAN PART-TIMERS

Today's Air National Guard is a national resource responsive to a far more intense economic and geo-political environment than ever before. No longer are we merely "weekend warriors."

Our mature combat force performs many round-the-clock missions traditionally reserved for the active duty Air Force. Air National Guard A-7s are on constant alert in Panama ready to defend the Panama Canal. The full-time air defense and strategic alert performed by our fighter interceptor and tanker crews are vitally important to America's immediate continental air defense and strategic deterrence requirements.

We share with the Air Force Reserve a full time responsibility for tactical airlift in the southern region. Our specially equipped LC-130s are the only ski-equipped airlift capability for icecap resupply in the Air Force. Our C-141 and C-5 units share the peacetime strategic airlift mission with the Air Force. Of special significance, the second Air Force Armenian earthquake relief mission was flown by a Mississippi Air National Guard C-141 aircrew. The majority of humanitarian missions to Soviet Armenia were flown by the Air National Guard and the Air Force Reserve.

We are especially proud of our aircrew training schools. The three advanced fighter and interceptor schools at Kingsley Field, Oregon; Tucson, Arizona; and McConnell AFB, Kansas provide combat-ready fighter pilots for our F-16s, A-7s and F-4s. Active duty and Air National Guard RF-4 crews receive tactical reconnaissance training at our RF-4 schoolhouse at Boise, Idaho. At Little Rock AFB, Arkansas, the Guard C-130 instructors provide the first C-130 flight training for about one fourth of the Total Force C-130 crews produced each year. As policy makers continue to review defense requirements, the Air National Guard stands ready to meet the challenges given to us.

TRAINING, EXERCISES AND DEPLOYMENTS

In a peacetime environment, the primary role of the Air National Guard is to train for its wartime mission. We train with other active and reserve components in overseas deployments, Joint Chiefs of Staff (JCS) exercises, Air Force training exercises, and Air National Guard-sponsored Composite Force Training exercises. Increased participation in joint exercises has enriched our training and reinforced the Total Force policy.

Our overseas deployments move units to theater locations throughout the world for short periods of time. These deployments provide our members with realistic, theater-specific training. Since airlift accounts for more than 90% of deployment costs, we have exercised several concepts in order to maximize our training dollars. Use of multi-unit deployments, vice single unit, has reduced per unit airlift costs by 20-25%.

During the past year our tanker units deployed aircraft and personnel to Torrejon AB, Spain; Sola, Norway; Andersen AFB, Guam; and Elmendorf AFB, Alaska. Individual Air National Guard tankers deployed to Korea, Japan, Guam, Germany and the United Kingdom. During these deployments, our aircrews gained valuable experience in European and Pacific theater air refueling tactics while our support personnel became seasoned in unit support operations away from home station. The Air National Guard also supports monthly flight rotation requirements in and out of Panama. In addition to performing aerial refueling, the KC-135Es move personnel and equipment. Our FY 1990 budget request will let us continue to support these valuable training opportunities.

For several weeks this past summer, three ANG A-7 units deployed aircraft and personnel to Spangdahlem AB, Germany, for in-theater training. This exercise, CREEK CORSAIR, provided valuable training for our aircrews and gave our North Atlantic Treaty Organization allies cross training opportunities with A-7 aircraft.

Our ski-equipped C-130 unit at Schenectady, New York, provides the only Air Force capability for transporting oversized cargo to remote radar sites on the Greenland icecap. This Arctic resupply mission, Volant Dew, entails airlift of all fuel, construction items and oversized supplies throughout the year; they support National Science Foundation projects on the icecap and provide search and rescue support when required. In addition, the unit has just returned from Antarctica where they supported the Navy and the National Science Foundation

In the Southern Command region, Air National Guard civil engineering, medical, and communication personnel regularly deploy for valuable training. The ANG maintains four A-7 aircraft on station at all times in defense of the Panama Canal as mentioned. We also support airlift requirements throughout Central and South America with six C-130 aircraft, a mission we share with the Air Force Reserve.

During FY 1988, our Tactical Airlift units provided 1,451 airframe days and 7,255 flying hours in support of 422 Joint Airborne/Air Transportability Training (JA/ATT) missions. This is an inter-service program for the wartime application of airlift in which the services jointly develop common procedures for combat operations to reach and maintain readiness.

The Air Guard also supports the Army in exercises throughout the world. Joint training programs such as those at the National Training Center at Fort Irwin, California, and the Joint Readiness Training Center at Fort Chaffee, Arkansas, provide training experience for both the Army and Air National Guard. Composite Force Training exercises are conducted throughout the year to sharpen fighting skills and familiarize our personnel with joint operations. These exercises are sponsored and planned by Air Guard flying units, Field Training Sites, and active Air Force units to encompass all mission areas of the Air Guard and are developed for the specific purpose of providing realistic training for all participants.

As a further measure of our global involvement, eight Tactical Fighter and Reconnaissance units participated in overseas deployments to Belgium, Japan, Germany, Norway, England, Iceland, and Turkey during FY

1988. The highlight of these deployments was CORONET CRUSADER, a 12 aircraft, 300-person deployment to Chitose AB, Japan. This was the first deployment to a Japanese defense forces base performed by a Continental United States-based Air Force unit.

Nine fighter/reconnaissance/interceptor units participated in the RED FLAG and MAPLE FLAG programs during FY 1988. Four units deployed to Alaska for the North American Aerospace Defense Command (NORAD)-sponsored AMALGAM WARRIOR 88.

In the past year, our combat communications units deployed more than 1,000 personnel to Europe, Central America, Southwest Asia and Korea. Additionally, hundreds of communications personnel participated in dozens of Continental United States and overseas exercises. The combat readiness of these units will be tested again this year by their participation in 26 exercises and deployments worldwide.

Five of our tactical air control units deployed to Europe during FY 1988, participating in 4 JCS exercises involving more than 550 personnel. Eight tactical air control units are scheduled to deploy to Europe in FY 1989 to participate in six Joint Chiefs of Staff exercises.

Our Engineering Installation (EI) units also deployed to Europe and Korea during FY 1988, while our civil engineering and services units participated in Joint Chiefs of Staff, European, Pacific, Alaskan and Southern Command exercises. In addition, our aerial port units deployed 85 teams, consisting of 2,050 personnel, to Military Airlift Command (MAC) overseas and Continental United States ports. This program provided invaluable training for a critical element of MAC's wartime cargo handling capability.

More than 16,000 civil engineering and services personnel routinely deploy to possible wartime theaters of operation to become familiar with local conditions, materials, construction techniques and equipment. Fifty-six percent of our civil engineering and services personnel will deploy overseas this year. Last year, Air National Guard civil engineering personnel supported exercises and United States interests in Central America, the Pacific and Europe. Again in FY 1989, civil engineering and services personnel will deploy to Europe, the Pacific, Central America, Canada, Alaska and numerous locations within Continental United States in support of exercises and deployment requirements. We will rotate eight 50-person civil engineering teams every two weeks to Palmerola AB, Honduras, to perform contingency construction projects in support of Task Force Bravo. Six teams will deploy to Honduras and Costa Rica to engage in Humanitarian/Civic Action (HCA) projects in remote areas of that country. We are currently planning a joint services HCA program in the Caribbean Basin island nations with Army engineers and Navy Seabees, under the umbrella of United States Atlantic Command. We are committed to maintaining an aggressive overseas exercise program in FY 1990 to insure that our flying and non-flying units can demonstrate combat capability and have the opportunity to visit the areas of the world where they may be required to fight.

READINESS

Air National Guard units are required to train for and maintain the same readiness standards as their active duty counterparts. One measure of our readiness is the results of Operational Readiness Inspections (ORI) conducted by active Air Force inspection teams. These inspections use realistic wartime scenarios, and provide a true test of the unit's ability to accomplish its wartime tasking. In FY 1988, all of our combat flying units tested passed these inspections, with 70% earning an overall rating of "excellent" or "outstanding."

While we can boast of our inspection records, we still have some readiness shortfalls. One of our greatest needs is for modern equipment. We made progress in FY 1988 by acquiring eight C-130 tactical airlifters and two HC-130 rescue tankers, sixteen MH-60 combat rescue helicopters, four of which will add a much needed capability in the Alaskan theater, and four C-26A aircraft which will modernize our operational support fleet while decreasing operating costs. With FY 1989 dollars we are procuring fourteen C-130Hs to replace aging C-130As, and three additional C-26As to further fill the wartime support airlift shortfall with low-cost, reliable aircraft. The C-26A aircraft is the best equipped and most capable aircraft of its type and was acquired in record time and at the lowest cost.

Yet for all the recent support of Congress we still have some equipment shortages. Some items of our communications equipment need modernization. Our information systems shortfall has been exacerbated by the increase of requirements and of limited funding. The C-130As and

C-130Bs have severe supportability problems developing due to age. We possess the only C-130As and the majority of the C130Bs in the Air Force inventory. As we move into the F-15, F-16, C-141 and C-5 missions, we are experiencing serious support equipment shortfalls which must continue to receive our special attention. While we are modernizing our fighter force with newer airframes, our fighters are generally early model aircraft that require avionics systems upgrades to be competitive against the current threat. Specifically, we have sought improvements to the F-15 A/B through the Multi-Stage-Improvement-Program (MSIP). MSIP provides significant combat capability enhancement as well as improved maintenance supportability. Though underfunded at this time, we hope to continue with this program and bring the technology level of our aircraft in line with that of the active forces.

We have embarked on modernization, survivability, and combat capability improvements to F-16A/B aircraft that include threat detection and warning systems, countermeasures dispensing upgrades and enhanced envelope gun sight systems, and avionics upgrades through Mid-Life Update (MLU) technology. We are looking to optimize training in these task intensive systems through Part Task Trainers (PTT). Due to the maintenance-intensive older engines in both our F-15A/Bs and F-16A/Bs we are experiencing problems with adequate numbers of serviceable spares. The remedy to this problem is through retrofit of the older engines to the newer F100-PW-220E configuration. We are working this approach with the other units of the Tactical Air Force that are also experiencing these problems.

Our tactical and strategic airlift forces have no electronic capability for threat detection and no self-protection systems to ensure completion of their assigned worldwide missions. In an effort to remedy this problem, we are actively participating with other major commands who are examining these problem shortfalls while emphasizing commonality within the airlift fleet. In FY 1990 we hope to begin an effort, starting with our tactical C-130 aircraft, to field an airlift defensive suite.

COMPETITION

Competition among similar units provides an opportunity to compare our skills with those of the other components and to assess our ability to meet the task of a wartime mission. Some of the competitive events we participated in during FY 1988 are highlighted in the following paragraphs.

Four of our units participated in Reconnaissance Air Meet '88 (RAM '88) at Bergstrom AFB, TX, in August 1988. Sponsored by Tactical Air Command, this reconnaissance competition is held every two years to demonstrate the capabilities of reconnaissance forces of the United States and those of our Allies. While the "Top Unit" Award went to the unit representing United States Air Forces in Europe, the Nevada Air National Guard was second, with our teams holding four of the top seven spots. The Top Maintenance Award went to the Nebraska Air National Guard, and they also won the Top Imagery Interpreter Award.

Four Air National Guard units competed in the biennial Air Defense competition, William Tell '88, held at Tyndall AFB, Florida, in October

1988. While three of the units were flying outdated F-4 Phantoms against F-15 Eagles, the Oregon Air National Guard finished ahead of two F-15 Squadrons in their F-4's.

The 129th Air Rescue and Reconnaissance Group, Moffett Field, California, won the coveted Pitsenbarger Award for the most outstanding pararescue section in the Air Force. Pararescue personnel have the longest training program and one of the most demanding jobs keeping current in medical skills, flying, parachuting and scuba training. This unit repeatedly demonstrated their outstanding performance from the North Atlantic to the Sierras of California in 20 missions which saved 21 lives.

MANPOWER

The single most important ingredient in readiness is manpower. Manpower levels of the Air National Guard have grown substantially over the last decade and are indicative of the missions being transferred from the active Air Force to the Guard and Reserve components. Our FY 1990 end strength of 116,300 is 1,325 above our FY 1989 level. The majority of the programmed growth is to support increases in the medical and security functional areas.

Full-time manpower is vital to the success of our mission and consists of a mix of Title 32 military technicians, Active Guard/Reserve (AGR) personnel and Title 5 civilians. The military technicians and AGR personnel are a highly trained cadre who accomplish the day-to-day workload and are the backbone and the reason for the high state of operational readiness enjoyed today. The majority of our military technicians are in maintenance and support functions. Flying training instruction, security, field training sites, ranges, detached alerts, recruiting, retention and other military functions are performed by AGR personnel. Title 5 civilians are employed at the Headquarters and at those bases where the Air National Guard has been designated as the host.

The revised recruiting goal for FY 1988 of 115,000 was exceeded by 221. For FY 1989, our total end strength authorized by Congress was 115,200, now however, due to our funding priorities our end strength has been reduced to 114,975.

We have prioritized recruiting efforts to fill critical skill positions before other existing or projected vacancies whenever possible. Our bonus and incentive funds are directed at traditionally hard to fill positions and those identified as critical for wartime taskings. The Montgomery GI Bill (MGIB) continues to be the single most successful inducement to recruit and retain members in the Air National Guard. Six year commitments, a prerequisite for MGIB eligibility, have increased in both new enlistments and reenlistments. This provides force stability which reduces training costs and improves unit combat readiness.

Prior service personnel still account for approximately 60% of our accessions and continue to provide savings in basic military training and initial skills training. Although we are able to use these trained and experienced personnel to improve unit combat readiness, we find that many lower grade positions in our units remain vacant. We also experience difficulty in offering prior service personnel the grade advancement opportunities necessary for retention beyond their initial enlistment with the Air National Guard.

MANPOWER PROBLEM AREAS

A serious problem facing the Air National Guard is the Active Guard/Reserve (AGR) grade ceiling. The AGR program was begun in FY 1979 as a test program. At the current time we have about 8,000 people involved. In FY 1988 our requested grade ceiling levels were reduced and in FY 1989 all increases over the FY 1988 level were disallowed. Many of our highly qualified flying training instructors are now leaving the AGR program to fly with the airlines because they view the AGR program as unstable and their chances for promotion slim. This program was established as a career incentive less than ten years ago. It must be allowed to mature, and when warranted, those holding validated higher graded positions should be promoted as they become eligible.

PERSONNEL LEGISLATION

An area of significant legislation that will impact personnel management within the Air National Guard is the Reserve Officers Personnel Management Act (ROPMA).

ROPMA, introduced to the 100th Congress, has met with little to no success. We ask that you consider and adopt this important legislation, which will soon be submitted to the 101st Congress, that will enhance the management and readiness of the Air National Guard officer corps.

FORCE MIX

The current force structure within the United States Air Force, Air National Guard, and the Air Force Reserve is a result of many years of programming and planning to develop the best blue suit mix to ensure the security of our nation and our commitment to the free world.

Many questions are being raised regarding the future role of the Air National Guard and the desirability of accepting more missions. If the threat within the world changes to the point where force mix changes are warranted, the Air National Guard position is that modernization and robusting of existing units is our preferred method of satisfying these changes in responsibility.

FY 1990/91 PRESIDENT'S BUDGET

Our request for FY 1990 provides the minimum funding necessary to sustain the combat capability and cost effectiveness of today's Air National Guard. By any measure, we are more combat ready today and provide more combat capability for our nation's defense than ever before. This is due to the high experience level of our personnel, the stability in our units, the quality and intensity of our training programs and the modernization of our equipment. Within today's fiscally constrained environment, I believe that the Air National Guard, among all military components, provides the greatest return in capability for the taxpayer's dollar. With 3.3% of the Air Force budget we provide over 90% of the air defense of America, 36% of the tactical airlift capability, and 24% of the tactical fighter capability. In FY 1990, we will log over 440,000 flying hours, participate in military exercises around the world, train with all services, and convert a third of our flying units to more modern equipment.

The "Operation and Maintenance-ANG" appropriation supports the day-to-day operations of all Air National Guard units. Major items funded by this appropriation are payroll costs for military technicians and civilian personnel, flying hours, depot maintenance of aircraft and equipment, real property maintenance, and the day-to-day supplies and services necessary during the normal course of operations.

The "National Guard Personnel-Air Force" appropriation funds the personnel costs of all Air National Guard members, the school and special training programs, subsistence and clothing costs, disability and hospitalization benefits, incentive payments, educational benefits, and retired pay accrual costs.

The "Military Construction-ANG" appropriation funds minor and major construction projects at our facilities as well as planning and design funds for future construction projects.

The following chart compares the FY 1989 funded position, and the

FY 1990 and FY 1991 projections for the three major ANG appropriations:

	(Dollars in Millions)		
Item	FY 1989	FY 1990	FY 1991
Operation & Maintenance, ANG	$2,017.6	$2,055.8	$2,184.9
National Guard Personnel, AF	1,029.6	1,047.0	1,087.9
Military Construction, ANG	158.5	164.6	107.2
Total	$3,205.7	$3,267.4	$3,380.0

CONCLUSION

The Air National Guard is an integral part of the Total Force. We continue our support of national security objectives while providing a militia uniquely qualified for our states' needs. Our responsibilities are global, national and local in scope, each offering its own set of challenges for the future.

The Air National Guard is successfully meeting the challenges we have been presented. The capability of our citizen airmen to respond to the most demanding wartime missions is a matter of record. We appreciate, and need, the continued strong support of the Congress, permitting the Air National Guard to continue modernization and to significantly progress toward our mandate of strength through readiness.

Mr. Chairman, this concludes my prepared statement and I will be pleased to answer any questions from you or members of your distinguished Committee.

TABLE 1

MAJOR FLYING UNITS OF THE AIR NATIONAL GUARD

Mission	No. of Units	Type of Aircraft
Tactical Fighter	33	A-7, A-10, F-4, F-15, F-16
Tactical Airlift	20	C-130
Aerial Refueling	12	KC-135E
Air Defense	12	F-4, F-15, F-16
Tactical Reconnaissance	5	RF-4C
Tactical Air Support	4	OA-37, OA-10
Rescue and Recovery	2	HC-130, HH-3, MH-60G
Strategic Airlift	2	C-141, C-5
Special Operations	1	EC-130E

TABLE 2

CONVERSION/MODERNIZATION SCHEDULE OF THE AIR NATIONAL GUARD

Unit	Action	IN FY
Dannelly Fld, AL	-18 F-4D; +18 F-16A/B	89
Kingsley Fld, OR	-18 F-4C; +18 F-16A/B	89
Stewart, NY	+3 C-5A (to 11 PAA)	89
McConnell, KS (RTU)	-36 F-4D; +36 F-16A/B	89
Hancock Fld, NY	-24 A-10; +18 F-16A/B	89
Willow Grove, PA	-18 OA-37; +18 OA-10	89
Fresno, CA	-18 F-4D; +18 F-16 A/B	89
Louisville, KY	+4 C-130B	90
Portland, OR	-18 F-4C; +18 F-15A/B	90
Ellington Fld, TX	-18 F-4D; +18 F-16A/B	90
Fargo, ND	-18 F4-D; +18 F-16A/B	90
Duluth, MN	-18 F-4D; +18 F-16A/B	90
Selfridge, MI	-18 F-4D; +18 F-16A/B	90
Andrews AFB, MD	-24 F-4D; +18 F-16A/B	90
Springfield, IL	-24 F-4D; +18 F-16A/B	90
McGuire AFB, NJ	-18 F-4E; +18 F-16A/B	90
March AFB, CA	-24 F-4E; +18 OA-10	90
Eielson AK	+4 KC-135E	90
Rickenbacker, OH	+2 KC-135E	90
Phoenix AZ	+2 KC-135E	90
Suffolk Co, NY	-1 HC-130P, -5 HH-3E; +5 MH-60G	90
Moffett, CA	-1 CH-3	90
Elmendorf AFB, AK	+4 MH-60G	90
Nashville, TN	-16 C-130A; +8 C-130H	90
Quonset PT, RI	-8 C-130A; +8 C-130E	90
Baltimore, MD	-8 C-130B; +8 C-130E	90
Martinsburg, WV	-12 C-130B; +12 C-130E	90
Channel Island, CA	-4 C-130E	90
Niagara Falls, NY	-18 F-4D; +18 F-16A/B	91
McConnell, KS (RTU)	+18 F-16	91
Memphis, TN	-8 C-130A; +8 C-141B	91
Moffett, CA	-4 HH3E; +4 MH60G	91
Elmendorf, AK	+2 HC-130N	91

TABLE 3

MISSION SUPPORT UNITS OF THE AIR NATIONAL GUARD

Type of Unit/Mission	Number of Units
Medical	101
Civil Engineering	98
Security	89
Communications Flights	41
Combat Communications	44
Tactical Control Units	30
Engineering Installations	19
Air Traffic Control Units	8
Aircraft Control & Warning	3
Joint Communications Support Squadron	2
Range Control	1
NATO Air Base SATCOM Squadron	3
Direct Air Support Center Squadrons	2
Communications/Electronic Maintenance Squadrons	2
Weather	39
Aerial Port	22
Reconnaissance Technical	2
State Headquarters Elements	54
Bands	12
Permanent Field Training Sites	4
Field Training Flight	1
Tower Operations	1
Airlift Support	2
ANG Host Bases (BOS)	5
Air Base Group (Guam)	1
Electronic Security Squadron	1
Tactical Air Control Party Flight (TACPF)	1
Air Support Operations Center Squadron (ASOCS)	1
Professional Military Education Center	1
TOTAL	590

Senator Levin. Thank you, General Killey.

INCREASING RESERVE SQUADRONS

First, let me ask you, General Scheer, if we deactivated three squadrons and we plused up 12 Reserve squadrons with six additional planes each, what would be the effect on our combat capability?

General Scheer. There is no problem from an Air Force Reserve point of view of robusting our units by six aircraft. So, in fact, what you would do for our units is increase their capability by 25 percent.

Senator Levin. In terms of our overall combat capability, if we put those six aircraft into 12 Reserve squadrons instead of having them in three Active squadrons, what is the effect on our combat capability?

General Scheer. Sir, if I could answer it this way. There are two types of capability: wartime and peacetime. In wartime capability, between the Active and the Reserve, there really is not a hill of beans difference. Nuclear is about the only thing we do not do that the Active does. In closed session we could explain from a pilot's point of view that this is a relatively quick loop to close. Peacetime capability, though—by that I mean the capability to forward deploy our forces on a full-time basis—obviously does not exist in the Reserve.

Additionally, the capability to react to peacetime contingencies prior to mobilization will be degraded every time we take something away from the Active and give it to the Reserve. So the peacetime capability is where we suffer.

Senator Levin. Are you able to recruit enough pilots for additional combat aircraft in the Reserve?

General Scheer. Yes, sir.

ONE-THIRD/TWO-THIRDS RULE

Senator Levin. Have either you, General Scheer, or you, General Killey, ever heard of the one-third/two-thirds rule of thumb in the Air Force? One-third Reserve, two-thirds Active duty?

General Scheer. Yes, sir. And as a rule of thumb it is probably a good way to describe that, when you look at the rotation base you need in the United States to support those overseas deployed units. An individual does not have to stay overseas for a significant amount of his career. The one-third/two-thirds, given today's force mix, has worked very well. I do not know how we arrived at that, but it seems to be an optimum. But it is by no means an ironclad rule or a requirement.

General Killey. That is also more applicable to our fighter aircraft side of the house. If you look at the full spectrum of missions, there is a wide variance of percentages that are in the Reserve component and the Active component. Though one-third/two-thirds is applicable to our tactical fighter aircraft.

Senator Levin. Were you here for the CBO testimony?

General Scheer. Yes, sir.

Senator Levin. Do you agree with their analysis that as many as 300 aircraft could be transferred to robust existing Air Force Reserve and National Guard squadrons without requiring any additional units to be activated?

General SCHEER. Senator, if you split that up based upon the current ratio between the Guard and the Reserve, then that would probably be a true statement.

Senator LEVIN. General Killey.

General KILLEY. Yes, sir, I concur with that. I just would like to reiterate the Air Force position that the current force mix in the forward-basing of our Air Force units is about right today, considering today's threat and our budget constraints. As these threats change, and our national strategy is reviewed with respect to our budget priorities, any changes to that forward-basing and force mix can, and will be, reflected in our programming budget process.

Senator LEVIN. What are you reading there? Is that an official Air Force statement?

General KILLEY. No. That was just my notes.

Senator LEVIN. It sounded very official. [Laughter.]

General KILLEY. No, sir. No official statement. Just my notes.

Senator LEVIN. It did not sound like it came quite from your gut, the way some of your other testimony did today. [Laughter.]

How did he do, Secretary Duncan?

Mr. DUNCAN. Senator, I think he is doing well. What he did not read from the card was that when you welcomed him you welcomed him as a brigadier general and I might note, because he would not, that he was recently promoted to major general. So, it is Major General Killey.

Senator LEVIN. We are going to demote our staff for putting a brigadier general in front of Killey. [Laughter.]

Congratulations to you.

General KILLEY. Thank you, sir.

Senator LEVIN. General Glenn. [Laughter.]

Senator GLENN. I never made it. [Laughter.]

STATEMENT APPROVAL

A question on your testimony today. Did it have to be cleared through OMB?

General KILLEY. Yes, sir.

Senator GLENN. It was okay?

General KILLEY. Our official statement was.

Senator GLENN. Was cleared through OMB? General Scheer, yours too?

General SCHEER. Yes, sir.

Senator GLENN. Were there any changes made in what you had originally submitted?

General KILLEY. I think there were some minor changes made in my statement in reference to our technician erosion problem. I had a more expanded version of it in my statement and they asked me to reduce it because of the fact that we do not have anything in the process right now to fix it.

Senator GLENN. Were you making suggestions on how to fix it?

General KILLEY. No, I was just highlighting the problem that we do have some problems on the technician side of our house, and the full-time support role.

Senator **Glenn**. Was there anything else that was changed as far as policy goes in your statement?

General **Killey**. No, sir.

Senator **Glenn**. General Scheer.

General **Scheer**. No, sir. No policy changes. The only changes to ours at the beginning of this hearing season were with regard to our need for new equipment, and I think that perhaps that was deleted. But there was nothing of any policy nature.

Senator **Glenn**. Well, it is a necessity, though, for you to be able to tell us exactly what your equipment needs are or we will not be able to make our own judgment on how we respond to your equipment needs. So this is something we may want to get into with additional questions here.

OMB has a limit to what it can change as far as policy goes. I do not quarrel with their ability or their responsibility to make sure that we do not have a lot of different policy statements floating around. They are floating out all over the place. But on things of substance where there are specific equipments or certain things are needed, then witnesses who come before us are duty-bound to give us their differences, if asked. So, I am asking, were there any substantive differences, as you saw them, between your original testimony and what was deleted?

General **Scheer**. No, Senator Glenn, there were not.

Senator **Glenn**. General Killey.

General **Killey**. No, Senator.

ROLE IN FORCE MIX PROCESS

Senator **Glenn**. What role, if any, do your respective offices have in preparing the force mix study that OSD has committed to provide us, specifically with regard to the feasibility and desirability of assigning additional flying missions to the Guard or Reserve?

General **Killey**. We have been used to reviewing what new type of missions we think would be applicable to the Air National Guard but that has not been completed yet and we are in the process of doing that.

Senator **Glenn**. When will that be completed? Was that the other study that you were referring to when you said we would have it within a week or so?

Mr. **Duncan**. It is the section 611 study, Senator, that Deputy Secretary Taft wrote you about in February.

Senator **Glenn**. Yes. All right.

Mr. **Duncan**. I really thought we could do it this week but certainly, in the near future, we will have it.

Senator **Glenn**. What is your policy on consulting with the Guard and Reserve on force mix studies? How much do you bring them into the loop?

Mr. **Duncan**. I am sorry, was that question directed to me?

Senator **Glenn**. Yes.

Mr. **Duncan**. Several of our levels of communication. First of all, I meet with the RC Chiefs on a regular basis. So I talk to them on all kinds of issues. Then, during the formal part of the PPBS process, they work with their services. If, for example, an issue comes up like the—well, the latest example is the 24 frigate thing within the Navy.

If a decision is made by the Secretary of Defense, he thinks he wants to explore something, I do not hesitate to go ask the Chiefs—is this a realistic option? What are the pros and cons? What is your best judgment? So that we do not go in and make a decision that is wrong from an operational, recruiting, or other standpoint. We communicate on several different levels in various ways.

Senator GLENN. Generals, I am interested in finding out what kind of a positive or passive role you are expected to have in this. In other words, do you initiate recommendations in the Active- and Reserve-mix process or do you just react to suggestions made by other people?

General SCHEER. Well, basically, Senator, we are not in the policy decision-making level for what the mix should be, and I think that is appropriate. But when OSD or the Air Force Chief, or whoever, would like us to take an objective look at a mission, we do so; as we do when one of our people suggests to one of the commanders that we look at a mission—perhaps space might be a good example. Where could we help you in space, particularly, in the engineering and the high tech areas? We do offer those kinds of suggestions. But our primary role is as a consultant. If we ask you to do this, could you do it—give us your best judgment. That is mainly our play in the process.

Senator GLENN. Well, I would think that your views on these things would be solicited on a more active basis than just that—just somebody else's ideas coming up. You are the ones at the working end of this thing. You know what your forces can or cannot do. And if there are deficiencies—for instance, not necessarily in the Air Force, I guess, but over in the Army—if there are deficiencies year after year after year, I would think there would be suggestions made—volunteered from down below—look, we have tried this thing, we have tried X for 14 years, and we cannot do it. And so, then that gets into total force policy. Are your views not solicited for things that you think you are doing very well at, and could expand, or we are not doing so good in this, we would like to maybe consider something else?

General SCHEER. Oh, yes, sir, that part is true. If we are running into trouble with a particular mission, whether it is for equipment, or lack of personnel, lack of training, or whatever, we will go to the Air Force agency—let us say, for example, the Air Training Command; and say we need X number of slots for training, and the system is very responsive. But when I am talking about the overall mix equation, Senator Glenn, that is so threat dependent, we are not in the loop—and I think appropriately so, to determine what we need to defend that threat. That is not for us. But once we are assigned a mission, then we have total freedom of action to plug back into the Air Force and OSD—how we are doing with that mission.

Senator GLENN. Well, I am not sure I would agree with you on your statement that you should not be in that loop. I think you should be. You are among our top military hierarchy in this country right now, with the forces that you both oversee, and I would think that you should be in the policy loop on that and be part of that policy-making decision.

The Total Force concept—indefinite, though, I guess it is—still assigns certain functions to both of you. And it would seem to me that any changes, as we go along and review it, I would think you would want to be playing a very vital role in that because your forces are going to be involved with that. Have you been consulted on the study that Mr. Duncan said would be here in a week or two on total force concept?

General **Scheer**. No, sir, I do not believe so.

Senator **Glenn**. General Killey.

General **Killey**. I am not sure if it is that specific study. We have been consulted on what we consider new missions that would be applicable for the Air National Guard. We have had an input on that equation.

Senator **Glenn**. Okay.

Senator **Levin**. I understand we have a vote coming up shortly. Are you done, Senator Glenn?

Senator **Glenn**. I have one more question for General Killey.

FORCE MIX RATIO

You said you thought the mix was about right. What do you base that on?

General **Killey**. Well, with today's threat that exists today, and the strategy that we are using to counter that threat, I think the mix is about right. But as it is reviewed and as the budget is reviewed, the threat changes. As we all know it is ever changing, and strategic decisions are made on how we will counter that threat. If then that decision is to shift force mix and mission to the Reserve component then we have plans on how we could accept that.

Senator **Glenn**. Okay. I think with the current threat and the situation—the scenario, and the way we war-game it and all that, I think probably as far as your particular specialty areas go, I would not necessarily quarrel with that—that it is about right.

In some of the other services, though, it is not about right. And that is what we have talked to Mr. Duncan about. And what I have been beating on here today is that it is broke and we need to fix it in some of the Reserve components in the other services where, when you war-game it, you find out you have reached a certain point and you cannot fulfill what the combat mission is supposed to be.

Your two groups are not in that particular situation fortunately. So that is what we are trying to get at with the Total Force concept thing, as to what are the right mixes as the threat changes, and as the whole world-wide scenario changes.

Thank you, Mr. Chairman. And, gentlemen, thank you very much. It has been interesting this afternoon. We will be following up with other questions, undoubtedly.

Senator **Levin**. Thank you, Senator Glenn. Just to wind up here—when you say that in your opinion the mix is about right, I take it that that does not mean we could not adjust the mix by 3 percent or 4 percent if we decided it was appropriate to do so and still have combat capability right where it is now.

General KILLEY. Sir, if the decision is made to shift force mix to the Reserve component, we have no problem with absorbing that additional amount.

Senator LEVIN. Not just absorbing, but I take it that from what you have said before, that we would not see any degradation in combat capability in wartime.

General KILLEY. Capability-wise, we maintain the exact same standards across the board on our tasking as the Active component.

As to what General Scheer said, our peacetime capability is less because of our ability to respond. Our wartime capability is exactly the same. The tasking in our DOC statements, our Designed Operational Capability statements, is exactly the same. We train to the same standards. There is nothing less.

Senator LEVIN. I think, General Scheer, you have basically indicated that before?

General SCHEER. Yes, sir.

Senator LEVIN. Thanks to this panel and all of our witnesses. This has been a long hearing and you have been very helpful and patient. We appreciate it. We will stand adjourned.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JOHN MCCAIN

MILITARY RISKS

Senator MCCAIN. Have you discussed the military risks inherent in each option with the Air Force?

Mr. HALE. On March 29, 1989, CBO provided a briefing on the planned testimony to the Air Force. Attendance at the briefing was determined by CBO's Air Force liaison and totaled about 30 people from a variety of Air Force offices and components. Copies of the briefing, along with the details of the options and their costs, were also provided to the Air Force shortly after the briefing.

Senator MCCAIN. If so, what were the Air Force's views?

Mr. HALE. The views expressed at this briefing on the risks to capability of Reserve transfers were mixed. Some Air Force comments during the briefing implied that Reserve elements would be less capable than Active Forces and that transfers such as those characterized in the briefing and testimony would greatly increase military risk; other comments seemed to imply that Reserves could perform as well as Actives and that such transfers could be made with little risk to military capability. CBO also received a formal response from the Active Air Force in the middle of April. This response indicated that CBO needed to acknowledge that the alternatives described in the testimony would increase risk by increasing the time required to transport CONUS-based forces to Europe in the event of war. In an effort to respond to this criticism, CBO characterizes its alternatives as lessening capability; we argue that the reductions in capability are modest because the options involve only modest transfers of Active Forces to the Reserves.

Senator MCCAIN. Have you discussed the military risks inherent in withdrawing U.S. Active air units from Europe with USAFE or USEUCOM? If so, what were their views?

Mr. HALE. No. CBO did not seek comments from specific commands, only from headquarters personnel.

IMPACT ON NATO AND WARSAW PACT BALANCE

Senator MCCAIN. Have you examined the impact of such withdrawals on the NATO and Warsaw Pact balance and NATO's conventional warfighting options? If so, what is the impact?

Mr. HALE. As a guide to answering this question, CBO estimated the numbers of general purpose forces stationed in Europe currently, and under each option. About 8.3 wing equivalents are currently in Europe. Options I and II would remove one wing leaving forces at about 7.3 wing equivalents. Option III would leave 6.8 wing equivalents in Europe.

WITHDRAWING AIR UNITS FROM EUROPE

Senator McCain. What are your assumptions about the impact of withdrawing air units from Europe on the status of the air base they are withdrawn from? Do they assume the bases are closed? If not, how will bases in Europe operate? What levels of improvement, O&M capability, munitions stocks, defense, and other support are assumed to be available?

Mr. Hale. CBO did not assume that any bases would be closed, in part because of a lack of data on the savings and costs associated with closing specific bases. Therefore, it is possible that CBO's estimates understate potential cost savings.

The Air Force SABLE model was used to provide estimates of costs and savings under CBO's options. This model reflects the marginal cost of adding or deleting a squadron of a particular type of plane. All estimates of savings were made by multiplying the number of squadrons times these typical costs. There could also be savings associated with wing and base overhead as well as costs associated with transporting people and equipment back to the United States, but CBO was unable to estimate either the additional savings or the transportation costs.

REDUCTIONS IN ROLE OR MISSION CAPABILITIES

Senator McCain. How much of the postulated savings are based on the assumption there will be reductions in role or mission capabilities, training, and other aspects of modernization and readiness?

Mr. Hale. CBO did not attempt to choose the exact squadrons that would be transferred; that choice would have to be made by Air Force officials. Nor did CBO request details of the training syllabi for squadrons in a particular theater. Discussions with the Air Force indicate that there can be substantial variation in training from squadron to squadron. Without identifying specific squadrons, it is difficult to quantify what might be lost in the way of capability or how much added training costs might be incurred.

CBO did attempt to characterize qualitatively the degree of lost capability associated with transfers of Active Forces to the Reserves. We characterized the loss of capability as modest. Out finding reflects the relatively modest changes proposed in our options. Data from competitions also suggests that the Air National Guard and Air Force Reserves perform quite well in comparison to Active Forces in the missions for which they train. Moreover, the alternatives assume no changes to modernization—in other words, no changes in the numbers or types of aircraft or munitions bought. Thus, CBO assumes that units are modernized as rapidly in the Reserves as they would have been in the Active Force structure.

There would probably be some loss in capability, however, Reserves neither train as many hours as Active Forces, partly because they have more experienced personnel who may not need as much training and partly because they train for fewer missions, nor can Reserves mobilize as quickly.

EUROPEAN OFFSETS AND INFRASTRUCTURE

Senator McCain. Is value of European offsets and infrastructure considered in the analysis? What level of offset and infrastructure support is assumed to continue if the units are withdrawn?

Mr. Hale. Since CBO did not choose specific forces for transfer—and did not assume that bases would be closed—the analysis implicitly assumes no changes in current infrastructure costs. As indicated in response to questions, savings could have been larger if, for example, CBO had assumed that all construction expenses associated with the transfer of the 401st to Italy were avoided.

Senator McCain. Has any detailed examination been made of the problems that already exist in deploying Active and Reserve air units from the United States to CONUS?

Mr. Hale. Not by CBO. CBO relied instead on DOD. The Department's annual reports to Congress indicate that roughly 60 squadrons—half of which would be Reserve squadrons—would be transferred to the NATO theater within 10 days of mobilization. Thus, the Department apparently feels that it can successfully move squadrons to NATO. CBO's testimony indicates that the transfers considered under the alternatives would exacerbate whatever problems exist with getting Reserves—and CONUS-based Active forces—to Europe, and that the implications would vary with the size of the transfer. (See prepared testimony.)

INCREASED AIRLIFT COSTS

Senator McCain. What are the increased airlift costs to redeploy the overseas based aircraft to their present locations should a conflict break out?

Mr. Hale. CBO did not conduct an independent assessment of implications for airlift costs. CBO did raise this issue with the Air Force in the hope that the Air Force might be able to provide an estimate of the additional airlift costs or an analysis of what materiel might be left behind or of how much longer it would take to deploy. The Air Force responded qualitatively, stating, for example, that closure times would be extended. But their response provided neither additional airlift costs nor estimates of delays in deployment, perhaps because these items are difficult to estimate and depend upon a large number of assumptions. Consequently, in the testimony, CBO also responded qualitatively, indicating that the reductions in forward deployments could reduce force size for either the Air Force or the Army during the M-plus-10 period. (See prepared testimony.)

EFFECTS ON M-PLUS-10 DAY FORCE

Senator McCain. In NATO, how would such a transfer affect the M-plus-10 day force?

Mr. Hale. If no additional airlift was provided and if current airlift assets were short or just met current deployment requirements, then the transfers would reduce NATO forces at M-plus-10. Reductions would be smaller for the more modest options and larger for the bigger options. Exactly what the force balance would be would depend upon DOD's decisions as to which forces would receive priority for airlift.

LEVELS OF RISK WITH TRANSFER

Senator McCain. What are the increased levels of risk associated with such a transfer?

Mr. Hale. As indicated in my written testimony, risk in the early days of a war would be somewhat higher, the increase depending upon the numbers of forces removed from forward deployments. Increases in risk in the longer term would depend upon a variety of factors including the size of the reduction in forward deployment, the level of readiness in the receiving Reserve elements, and the decisions about airlift mentioned above.

INCREASED OPERATING COSTS

Senator McCain. What are the increased operating costs to deploy the overseas aircraft to the areas they are presently assigned so that they can train in the environment in which they must fight?

Mr. Hale. The options in CBO's testimony assume that all units are returned to CONUS. Estimates of operating costs in the testimony assume that, in accordance with standard Reserve policy, Reserves are sent overseas roughly every 3 years to become familiar with their wartime operating arena.

LOSS IN READINESS

Senator McCain. What is lost in the way of readiness when these aircraft cannot routinely train in their present overseas environment?

Mr. Hale. CBO cannot provide a quantitative answer to this question. It is possible, of course, that Reserves based primarily in CONUS would be less ready to fight than Actives based overseas. There are, however, several factors that might reduce the readiness losses associated with greater use of Reserves. First, safety concerns are causing increasingly severe restrictions on flight training in Europe, especially in West Germany, and this may reduce the amount or quality of training available to Active units in Europe. Indeed, this issue was raised as a source of concern during the hearing by Senator McCain. Second, some have argued that weather conditions in many European bases may be less favorable for training than those at many stateside bases. Finally—depending upon which squadrons are chosen for transfer—Active Forces currently based in Europe may not be operating out of their wartime bases and thus may not be garnering the advantages of training where they would fight.

DUAL CAPABLE AIRCRAFT

Senator McCain. For the dual capable aircraft, what is the impact on the readiness of our theater-based nuclear deterrent?

Mr. Hale. It seems unlikely that all pilots and all squadrons currently in USAFE train for the nuclear mission. Thus, at least for the smaller options, it may be feasible to choose forces that do not currently perform this mission. If so, the smaller options might have no adverse effects on our theater-based nuclear deterrent. For Option III, which transfers two squadrons of F-111 aircraft to the Guard, some adverse effects on our theater-based nuclear deterrent would be likely.

REDUCED OPERATING COSTS

Senator McCain. Using the Sable model and CBO's assumptions and analytical approach, is there any limit to the number of transfers of Active duty Air Force aircraft to the Reserve components that would not result in reduced operating costs?

Mr. Hale. It is quite possible that some options involving transfers of Active to Reserve Forces would save little or nothing. The transfers described in CBO's testimony involve eliminating Active units and robusting Reserve units. Operating savings for transfers that do not involve robusting are considerably lower because they are not credited with savings in overhead. Also, if Reserve manpower requirements were increased greatly because of transfers, then added costs might have to include preliminary training of nonprior-service personnel who would have to be recruited if enough prior-service personnel were not available. Inclusion of such costs would further reduce operating savings. The combination of both these factors could result in a situation in which the operating costs for Reserve forces could closely approach those in the Active Air Force.

Indeed, options that go much beyond Option III in our testimony might result in much reduced savings. Option III, which transfers 305 aircraft to the Reserves, roughly represents the largest transfer that could be made without creating additional Reserve squadrons or making other important changes.

PILOT SHORTAGE

Senator McCain. CBO estimates that transferring positions to the Reserve components will help reduce the current Air Force pilot shortage. Given the fact that the Active Air Force is the primary source of pilots in the Reserve components, would not a dramatic increase in the number of Reserve component flying billets create greater incentive for Active duty pilots to leave the service and join the Reserve components?

Mr. Hale. The effect suggested by this question implies that pilots would leave a full-time position with the Active Air Force because of the availability of a part-time job with the Reserves. Most pilots making this decision would have to find a full-time job as well. It seems more likely that pilots would find a full-time job first, and make their decision to seek such a job based on the availability of full-time jobs and on pay, living conditions, and job satisfaction in the Active Forces. The availability of Reserve billets might have some influence on some pilots, but it seems unlikely to be a deciding factor for many. Moreover, limiting the size of the Reserves to avoid providing attractive alternatives to pilots would have the undesirable effect of denying the Air Force the services of those who do leave.

Another aspect of Active service that influences pilot retention, according to the Air Force, is the amount of time spent in flying billets. The Air Force argued that the number of rated officers occupying non-flying billets would remain constant regardless of the size of the Active Force, and that with the small Active Forces envisioned under the options, Active pilots would fly less. The Air Force could, however, avoid this problem by reducing the number of non-flying billets; indeed, some Members of Congress have urged just such a reduction.

MILITARY AND OPERATIONAL RISKS

Senator McCain. Could you provide a detailed analysis of the military and operational risks that would result in reducing Active air strength in Europe as proposed in the CBO study?

Mr. Duncan. A detailed and comprehensive analysis of the military and operational risks associated with the Active Air Force reductions in the CBO testimony is not possible in the time permitted to respond to these questions. However, we believe the military and operational risks of the CBO-proposed tactical air force reductions in Europe would be significant. The risks would vary for each of the CBO options and would depend on which units were actually withdrawn. The CBO options I and II each propose [deleted] from Europe but do not specify which units would be withdrawn. In NATO's Southern Region, for example, recent assessments indicate [deleted]. The correlation of forces in the Central Region strongly favors the Warsaw Pact. [deleted] USCINCEUR noted that implementation of the INF Treaty [deleted]. Finally, each of the CBO options places additional demands on the strategic lift force structure where well-documented shortfalls already exist. Deploying comparable [deleted] units from the United States for those withdrawn in the CBO proposals would require significant increases in strategic airlift sorties. The likelihood of delays in the arrival times of reinforcing units (ground and air) imposes an additional level of risk to the successful defense of Europe.

LEAST DAMAGING WAY TO REDUCE AIR STRENGTH

Senator McCAIN. If you were required to reduce air strength in Europe by a total of one wing, what would be the least damaging way to accomplish this in terms of its impact on NATO military capabilities? What would the cost-effectiveness trade-offs be between dual-basing and converting the withdrawn units to Reserve Forces?

Mr. DUNCAN. The least damaging way of reducing air strength in Europe by a total of one wing would be to return it to CONUS and dual-base it and buy additional strategic lift to return it to Europe quickly if necessary. Dual-based units have less deterrent effect and require more time prior to the first employment sortie compared with forward-deployed forces. If the withdrawn squadrons were put into the Reserve, there would be a loss of responsiveness and capability. If the units were retained on Active duty in a dual-based status, direct cost savings would be marginal, and there would be one-time costs of approximately $465 million for MILCON, prepositioning equipment, strategic lift, and PCS moves, assuming a requirement to return to Europe within 10 days. If these units were put into the Reserve instead of retained on Active duty in a dual-based status, the savings would be approximately $210 million per year in operating costs; however, those savings could be largely negated in the first year by required up-front costs for MILCON and movement.

Senator McCAIN. If you were required to reduce air strength in Europe by a total of two wings, what would be the least damaging way to accomplish this in terms of its impact on NATO military capabilities?

Mr. DUNCAN. My answer would parallel my response for one wing, that is, the least damaging way of reducing air strength in Europe by a total of two wings—in terms of its impact on NATO military capabilities—would be to bring them back to CONUS and dual-base them and buy additional strategic lift to return them to Europe quickly if necessary.

REDUCING U.S. MILITARY FORCES AND COSTS IN EUROPE

Senator McCAIN. Are there preferable ways to reducing U.S. military forces and costs in Europe? What would those options be as an alternative to a one-wing reduction? What would those options be as an alternative to a two-wing reduction? What would the cost-effectiveness trade-offs be between dual-basing and converting the withdrawn units to Reserve Forces?

Mr. DUNCAN. Of course our preference is to avoid unilateral reductions of U.S. military forces in Europe because of the inherent risk associated with these types of withdrawals. Forces deployed forward, near their area of responsibility, have a tremendous advantage over similarly manned and equipped CONUS-based units because they live, exercise, and train in the actual environment in which they might fight. Moreover, the prolonged exposure of forward-deployed units to each other as well as the necessity for constant combined and support force coordination leads to a unit cohesion and responsiveness not easily achievable by CONUS-based forces.

If the withdrawn forces are placed in the Reserve components, response time will be increased. In a very short or no warning Warsaw Pact attack, the increased response time could be crucial.

IMPACT OF ACTIVE AIR UNIT WITHDRAWALS ON CFE TALKS

Senator McCAIN. What impact would U.S. withdrawals of Active air units of the kind examined by the CBO have on the U.S. negotiating position in the CFE talks?

Mr. WOODWORTH. The withdrawal of U.S. Active air units prior to bilateral agreement and ratification of the CFE negotiations could:

Erode NATO's bargaining position/leverage with the East;

Undermine efforts to get our allies to share more in the burden of defense; and

Encourage other NATO members to make similar unilateral cuts.

IMPACT ACTIVE AIR UNIT WITHDRAWALS ON NATO FORCE IMPROVEMENT NEGOTIATIONS

Senator McCain. What impact would U.S. withdrawals of Active air units of the kind examined by the CBO have on the U.S. negotiating position in the NATO force improvement negotiations?

Mr. Woodworth. Any unilateral U.S. withdrawal of forces from Europe prior to a CFE agreement on mutual conventional arms reductions would be viewed by NATO as undermining our position with the Warsaw Pact/Soviet Union. A unilateral withdrawal of U.S. airpower from Europe outside the context of CFE would encourage other nations to make similar cuts as well as negatively impact burdensharing in general. Our efforts to improve conventional force capabilities through the NATO Defense Planning Committee's force goal process would also be greatly hampered by unilateral force cuts on the part of the United States.

TACTICAL AIRCRAFT IN CFE REDUCTION OPTIONS

Senator McCain. The kind of reductions examined by CBO could lead the U.S. and NATO to include tactical aircraft in the current CFE reduction options. Please provide a detailed examination of the risks and advantages of including tactical aircraft in the conventional force reductions.

Mr. Woodworth. Tactical aircraft and helicopters are now included in NATO's CFE proposal. The proposed 15 percent cuts in both aircraft and helicopters would be a collective NATO reduction, thus the specifics of U.S. reductions within that number is as yet undecided.

Senator McCain. To what extent would such a shift mean accepting the Soviet position?

Mr. Woodworth. The Soviets have agreed to include aircraft in the CFE negotiations. There are, however, a number of significant definitional issues to be resolved.

WORST CASE RISKS OF SHIFT IN NEGOTIATING POSITION

Senator McCain. What are the worst case risks in such a shift in our negotiating position?

Mr. Woodworth. The worst risks would be that excessive cuts could result in a loss of essential mission capabilities, such as air-to-ground, nuclear delivery or electronic countermeasures. But the 15 percent NATO reduction will not cut to that extent, provided the reduction is collective, allowing NATO to allocate its cuts on an alliance-wide basis.

VIEW OF ALLIES ON SHIFT IN NEGOTIATING POSITION

Senator McCain. How would such a shift in our negotiating position be viewed by our allies?

Mr. Woodworth. The inclusion of aircraft in the CFE negotiations has been accepted by all NATO members. There is concern among members on the types of aircraft that will be eliminated, and discussions on this allocation have just begun in NATO.

EFFECT ON OTHER ARMS TALKS OF SHIFT IN NEGOTIATING POSITION

Senator McCain. How would such a shift affect our position in other arms control talks?

Mr. Woodworth. The NAC proposal to limit land-based combat aircraft may mean that some aircraft would be considered in both CFE and START, for example. The NATO Alliance is currently determining how to best coordinate its CFE position with these other negotiations.

SHORTFALLS IN TACTICAL AIR FORCES AND REINFORCEMENTS CAPABILITIES

Senator McCain. What are the major shortfalls in our existing tactical air forces in Europe and in our existing reinforcement capabilities? How would the options proposed by CBO increase these shortfalls?

Mr. Woodworth. UNCINCEUR provides continuing assessments of his ability to execute this global war plan. Shortfalls and concerns regarding tactical air forces and reinforcement capabilities are among the many items which receive comment. Recently, the following shortfalls, concerns, and comments were identified concerning tactical air forces and reinforcement capabilities.

a. [Deleted.]

b. The arrival of tactical airlift augmentation forces essential for force readiness and sustainability is untimely. Fiscally mandated cuts in C-130 force structure resulted in lower crew ratios and decreased cargo carrying capability.

c. Strategic mobility shortfalls in both airlift and sealift remain major obstacles in the capability to execute the war plan.

d. [Deleted.]

e. Air-to-air and air-to-ground missiles are in short supply.

f. Implementation of the INF treaty is placing an increasing burden on dual-capable aircraft.

g. The most significant tactical air force structure issue in fiscal year 1988 was eviction of 401st TFW from Torrejon. No degradation to Southern Region support is expected if relocation occurs in Italy.

All of the options proposed in the CBO testimony would increase these shortfalls and amplify the CINC's concerns. [Deleted.] Placing additional C-130 aircraft into the Reserves would further reduce the timeliness of tactical airlift augmentation forces. Moving theater-based aircraft to CONUS would increase the strategic lift shortfall and worsen the strategic mobility posture.

CURRENT AIR BALANCE IN EUROPE

Senator McCAIN. What is the current air balance in Europe estimed to be in the Central Region and on each flank at M-Day, M+7, M+14, M+21, M+30? How is this balance projected to change by 1994?

General BOYD. The current air balance defined as combat aircraft, excluding helicopters and support aircraft in place, is estimated to be [deleted.]

Notes:

(1) Combat aircraft include Air-Air Fighters, Air-Ground Fighters, Recce and ECM aircraft.

(2) Numbers do not include France which is outside the integrated military structure.

(3) UKAIR does not support the Central Region or either flank.

(4) SACEUR Strategic Reserve (SSR) could be used in CR, NR, or SR.

U.S. PORTION OF AIR BALANCE

Senator McCAIN. What portion of the air balance in each region does the U.S. now contribute on a given date of mobilization?

General BOYD. The current apportionment of NATO combat aircraft provided by the U.S. Air Force in each region [deleted].

U.S. PLAYS SPECIAL ROLE IN EUROPE

Senator McCAIN. To what extent does the United States play a special role because it contributes special purpose or high capability aircraft in Europe?

General BOYD. The U.S. Air Force commitment to NATO includes unique capabilities which are unparalleled by the commitments of the other Alliance member nations. For example, the USAF provides 4 in-place squadrons for air defense as NATO Command Forces under the peacetime operational command of SACEUR. These squadrons are equipped with [deleted] the most modern all-weather, high technology fighter available in the world today. They are the mainstay of the peacetime, all-weather capable, NATO-integrated air defense force in the Central Region [deleted]. In addition the USAF is the major provider of aircraft designed specifically to perform Tactical Reconnaissance and Electronic Combat missions such as Suppression of Enemy Air Defenses (SEAD) and Electronic Warfare (EW). The USAF RF-4 TEREC-PARPRO, TR-1, F-4G, EF-111 and EC-130 aircraft are solely dedicated to accomplishment of these missions. While some allied nations possess limited capability in these roles, they execute the missions as a secondary task and their aircraft are not specifically designed for these missions. Finally, with implementation of the INF agreement, [deleted] in NATO's effort to restructure theater nuclear forces to support the Flexible Response strategy. The U.S. commitment of [deleted] supports this effort [deleted].

AIR REINFORCEMENTS

Senator McCAIN. What air reinforcements does the United States already plan to contribute from CONUS at each mobilization date by unit, type of aircraft, and numbers of aircraft? Which units are already Air Reserve or National Guard?

General BOYD. The following is the total deployment of CONUS based units to the European theater (Base Case). Data has been extracted [deleted] based on the fiscal year 1990 amended President's budget. Employment days have been grouped into 5-day increments, with total number of aircraft designated in each Mission Design Series (MDS).

[Deleted.]

The total number of aircraft deployed to Europe by MDS is indicated on the right. The left side indicates that portion of the total that the ARC provides.

[Deleted.]

Senator McCain. To what extent are current air reinforcement capabilities already limited by:

a. Refueling capability;
b. Basing and base protection/defense;
c. Maintenance and repair capability;
d. Munitions and critical parts limitations;
e. Training and readiness; and
f. C^3I/BM/AC&W?

General Boyd. a. Refueling capability: Already stressed by current air reinforcement TPFDD flow. Any further designation of units as requiring long-haul refueling support for deployment must be accompanied by a corresponding increase of air refueling capability. Currently project 39 percent shortfall.

b. Basing and base protection/defense: USAFE Main Operating Bases have limited excess capacity to accept additional reinforcing units. The Collocated Operating Base (COB) concept provides access to allied airfields, but requires the construction of additional facilities. Currently, COB Minimum Essential Facilities (MEF) (dispersed parking for 70 percent of the reinforcing unit's authorized aircraft and fuel/ammo storage for 7 days of operations) are incomplete. For the fiscal year 1989 force beddown, 37 of 111 reinforcing squadrons have complete MEF at their assigned COBs. By fiscal year 1992, MEF will be complete for 91 squadrons. Additional shortfalls exist in Essential Operating Facilities to sustain operations beyond seven days; for example, Hardened Aircraft Shelters (HAS) to protect our reinforcing aircraft. For HAS, approximately 70 percent of the requirement for reinforcing units will exist or are programmed through fiscal year 1990.

c. Maintenance and repair capability: Current shortfalls in parts, depot maintenance, and repair will be exacerbated in the FYDP. Additionally, First and Second Destination Transportation shortfalls cause diversions of cargo to surface movements which lengthen transportation pipelines and impact readiness and sustainability of overseas forces.

d. Munitions and critical parts limitations: Major shortages in storage space for munitions assets continue to cause critical shortfalls of available munitions in USAFE at bases of intended use. Currently, 66 percent of the 60-day munitions requirement is in theater with 68 percent malpositioned, some by as much as 1,800 miles. Due to these severe malpositioning problems, continued construction of munitions storage facilities at the bases of intended use is essential. Malpositioning and lack of sufficient intra-theater lift, particularly tactical airlift aircraft, limit availability of critical spares.

e. Training and readiness: Quality training at the proper intensity is a function of numerous factors which require continued support regardless of location: flying hours; training munitions expended; range, target, and airspace availability; threat simulation; and training facilities. There is a critical shortage of aircraft defensive systems to fight in an electronic jamming intensive environment.

f. C3I/BM/AC&W: There is a critical shortage of jam-resistant, air-to-air and air-to-surface UHF and VHF voice communications, navigation and position fixing equipment, long haul communications, and appropriate information processing and security systems. Continued support of the E-23 as a world-wide deployable airborne surveillance and C3 system for tactical and strategic missions is essential well into the 21st century.

GENERAL RISKS AND PROBLEMS

Senator McCain. What general risks and problems would be posed by adding additional Reserve air units to each of the problem areas listed in the previous question?

General Boyd. There are risks to national readiness and potential training problems, especially if the ARC units added are sourced from Active Air Force drawdowns. Since the ARC is currently required to maintain fewer operational capabilities than the Active Force, the ARC flies less and trains less in most weapon systems. Accordingly, if we shift units/aircraft from the Active Force to the ARC, without significantly increasing the ARC's tasking as well as placing a heavier burden on the remaining Active Force, we decrease our total Air Force operational capability. As a result, our global commitments to NATO and other theater CINCs for specific missions and special capabilities would be significantly degraded. To maintain the same capability as the Active fighter force in Europe, the ARC would have to broaden its capabilities in areas now performed by Active units only, and become mission-ready in those new capabilities (e.g. nuclear). To significantly increase the training load on ARC units would increase their costs and decrease relative savings from force structure transfer. Some Active fighter capabilities—permanent forward-basing and dual-basing, for instance—are not possible to sustain in the Air Reserve Component. When Active Force duties, primarily OCONUS, are adopted by CONUS-based Reserve or Guard units, the dual-based requirement remains for the Active crew force to carry out. In addition to the reductions in savings, the heavier load left for the now reduced Active Force will exacerbate pilot retention problems. If Active units are moved from Europe to the CONUS and transferred into the ARC, Air Force responsiveness is especially affected. Forward-basing has been a major foundation of U.S. foreign policy and a sign of our commitment to the NATO Alliance. Bringing home units from Europe could significantly impact NATO by reducing our peacetime deterrence and would degrade our immediate combat capabilities in Europe, especially in the southern region.

BASE AND PERSONNEL REDUCTIONS

Senator McCain. To what extent would each such reduction allow the closing of given U.S. bases in Europe, and/or the reduction of combat unit and other personnel?

General Boyd. The determination of the number of bases that could be closed and the number of people and units that could be potentially withdrawn is highly dependent upon the unit or units selected for withdrawal. Because USCINCEUR is tasked with the responsibility for deterrence and warfighting in the European theater, he, in conjunction with his air component commander, CINUSAFE, should establish priorities with respect to force reductions. In addition, any significant closures must be considered in light of the need for facilities and infrastructure that would be required to support USAF reinforcing units in wartime. Therefore, it would be prudent to place some air bases, designated for closure, in standby status to preserve the infrastructure for subsequent use. Finally, withdrawal of units from Europe could provide opportunities for the remaining forces to be more widely dispersed and to occupy hardened facilities that have been funded through the NATO Common Infrastructure Program. This initiative would contribute to NATO's efforts to deny our adversaries the opportunity to restrict NATO employment of air power in a conflict. Without USCINCEUR's input and coordination with NATO, it would be inappropriate to recommend withdrawal of specific units and closure of air bases.

ACTUAL SAVINGS

Senator McCain. What actual savings would be achieved in defense spending and manpower over a 5-year period if the units withdrawn were converted to Reserve status in the United States?

General Boyd. The cost savings suggested by the CBO were the comparative O&S cost savings of typical Active, Reserve, and Guard units with all transfers occurring in fiscal year 1990. While this is a static comparison of unit O&S costs, it is not a budget-quality analysis. There was not enough detail in the CBO analysis to accurately predict an actual cost savings. However, it is clear that even a notional transfer of this magnitude would take longer to complete (2 to 4 years). In addition, the one-time cost of transferring, MILCON, and conversion training cost would be significant. Therefore, over a 5-year period the actual cost savings would be substantially less than that suggested by the CBO, and could actually increase costs in the first couple of years to cover the initial cost of the transfers. The full manpower savings would not be achieved until after the Active to Reserve components transfers were complete. Cost savings would also be a function of capability expectations. If the Reserve component squadrons were expected to provide the same capability as the active duty units they replace, costs would dramatically rise over the CBO prediction. Only by accepting losses in capability could significant savings be realized.

CFE COMPLICATIONS

Senator McCain. What complications and problems would such reductions pose for the CFE negotiations?

General Boyd. If Congress exacts budget cuts requiring unilateral reductions of USAFE assets, we must ensure U.S. strategy is developed to turn an economic necessity into an arms control/political advantage (i.e., offer as an arms control initiative to exact a quid). Any congressionally exacted U.S. unilateral reductions in the aftermath of the May 29-30, 1989, NATO summit would send the wrong arms control signal to both NATO and the Warsaw Pact.

A unilateral reduction of aircraft for budgetary reasons would appear as an attempt on the part of the United States to protect aircraft from destruction/accountability under a Conventional Armed Forces in Europe (CFE) agreement. It also would raise the number of aircraft our NATO allies are required to destroy under the Bush-proposed initiative. Neither NATO nor Warsaw Pact would view that as a good faith arms control approach.

Unilateral reductions in aircraft would dampen Warsaw Pact interest in reaching a CFE agreement since their primary goal is to reduce what they perceive as a NATO qualitative advantage in aircraft, and not reduce their own overwhelming advantage in ground forces. NATO's primary CFE bargaining advantage would be eliminated if the Warsaw Pact thought U.S. aircraft would be removed anyway.

Additionally, unilateral reductions might fuel Warsaw Pact demands that U.S. aircraft outside the Atlantic-to-the-Urals (ATTU) negotiating region, but dedicated to reinforcing NATO, should be subject to some sort of restriction under CFE. The United States is opposed to including reinforcement aircraft in CFE because rapidly reinforcing aircraft serve as a balance against the Soviet advantage in geography. Further, restrictions on CONUS-based aircraft would restrict otherwise global Air Force operations.

Savings anticipated from converting European-based Active aircraft units to CONUS-based Reserve units are unlikely if these aircraft are to remain a viable NATO reinforcement tool. Removal of air forces from Europe would require maintenance of both CONUS facilities/manpower and "warm" bases (runways, shelters, fuel, ammo, etc.) in Europe to support rapid reinforcement from which to fight during conflict. The air staff has proposed air force infrastructure not be included in CFE since it would severely impact Air Force ability to rapidly reinforce in response to Warsaw Pact aggression.

Unilateral U.S. aircraft reductions would complicate CFE negotiations at a time when NATO cohesion is critically important.

Questions Submitted by Senator Slade Gorton

QUANTIFYING CONCERNS REGARDING SAVINGS

Senator Gorton. In your statement, when discussing the savings for the options and the sensitivity of the savings, you present so many concerns that the savings appear to be in doubt. Are there ways to quantify those concerns so we can get a better idea of the savings and the best option to consider?

Mr. Hale. Unfortunately, a number of the factors that would influence a decision about transfers to the Reserves—particularly decisions about the effects of such transfers on wartime capability—are not easily quantified. While some models may purport to quantify these effects, the results of these models often depend on judgments about the nature of the war and the effectiveness of particular units. CBO quantified those factors we felt could reasonably be described in terms of numbers. For other factors, we felt we could be most helpful by presenting a range of views, including those of the Active and Reserve Air Forces and outside experts.

COST AND CAPABILITY IMPACTS

Senator Gorton. Would you suggest that the DOD try to put some cost and capability impacts on the recommended options before we consider them for legislative actions?

Mr. Hale. DOD does not have models that will quantify all the factors that must enter into a decision to transfer Active units to Reserve Forces. It would, however, be helpful to seek DOD's judgments about such transfers, especially about the operational details of implementation. These represent policy choices that, though operational in nature, really determine the level and indeed that existence of savings.

CBO POSITION ON 401ST

Senator Gorton. Buried in the analysis appears to be a CBO position to bring the 401st Tactical Fighter Wing of dual-capable F-16 aircraft home to the CONUS, transfer the missions to the Reserve forces, and reduce the Active Force structure to get the savings. This combination represents a far-reaching combination to come from a study of mission transfers. Do you mean to recommend such a package or did it just come out that way?

Mr. **Hale**. Though CBO attempts to analyze alternatives that are germane to the issues being considered by Congress, CBO does not make recommendations. Specifically, we make no recommendation regarding the 401st Tactical Fighter Wing.

All our options assume the transfer of a wing of F-16 aircraft from Active Forces in Europe to CONUS-based Guard or Reserve squadrons. Presumably, it is this assumption that led you to conclude that we were implicitly making recommendations regarding the 401st, a European wing which contains F-16 aircraft. In fact, the choice of options was based on discussions with staff members that occurred many months before the testimony. At that time, it was decided—for reasons quite apart from the issue of the 401st—that all alternatives should include bringing home some F-16 aircraft based in Europe. F-16 aircraft were always included because they are the most numerous aircraft in Tactical Air Forces and are already in the Guard and Reserve force structure. We chose to assume the transfer of a wing in Europe because of concerns raised by the Air Force about its "rotation base," the number of planes it had stationed in overseas locations in comparison to those stationed in CONUS. As described in the prepared testimony, the Air Force wishes to have no more than about 40 percent of any particular type of aircraft stationed overseas. Transfer of a European wing either minimizes increases in the rotation base or avoids increases altogether.

SABLE COMPUTER MODEL

Senator **Gorton**. You have heard the testimony of the CBO that there could be savings if these missions were transferred. They say they used the DOD SABLE computer model to determine the costs/savings. What is your opinion of this model as to its adequacy to make force structure and mission transfer decisions? Are all the necessary logistics, support, and overhaul funding items included in this model? If not, what items are not included and could they influence the transfer decisions?

Mr. **Duncan**. "SABLE" is an acronym for Systematic Approach to Better Long-Range Estimating. The model is designed to estimate aircraft peacetime operational and support (O&S) costs for typical Air Force flying units. Air Force Cost Center personnel have recently (post the CBO study) modified the model to enable cost comparisons of Active and Reserve component flying units. Further refinements on manpower costs are needed, but the model is now adequate to portray accurately the cost consequences of potential force structure and mission transfer decisions. The model does not consider one-time costs such as military construction, aircraft transfers, and personnel training costs, so those costs would have to be computed separately.

The model also excludes software maintenance costs, depot overhead costs, and family housing costs; however, none of these costs would influence the cost considerations in transfer decisions.

LOSSES ASSOCIATED WITH MOVE OF 401ST

Senator **Gorton**. Assuming that you were put in the position of the CINC in Europe and you were asked to comment on this transfer of missions from the Active to the Reserve forces as to its impact, what would you lose by moving the 401st Tactical Fighter Wing to the CONUS and from the Active to the Reserve Forces?

Mr. **Duncan**. I will not presume to speak for General Galvin concerning the warfighting implications of the CBO proposals. However, the political and strategic significance of the 401st TFW to NATO's Southern Region was carefully considered when the Alliance supported its relocation to Italy. Without the 401st in NATO, we lose the only U.S. fighter wing in-place in the Southern Region and the immediate availability of 72 multi-purpose, dual-capable aircraft responsive to defend key Southern Region assets. By returning the 401st to the CONUS, SACEUR loses a force immediately available with capabilities in air defense, ground attack, deep interdiction, close air support, and nuclear strike. Politically, the return of the 401st would likely be viewed by our allies and adversaries alike as dramatically weakening the defense of this vital Southern flank. Moving the forces into the Reserves compounds the problem and results in an additional loss of capability. We would lose aircrew familiarity with terrain, allied war plans, weather, airspace, and NATO procedures. We would also lose the invaluable experience aircrews derive from regular in-theater exercises with the allies. The general readiness of the combat forces available to the CINC would also decline. Further, since ARC units do not train for nuclear strike, we would also lose this critical deterrent capability. Finally, by returning the 401st to the CONUS Reserve Forces, we would incur an additional strategy lift liability increasing the time required to deploy combat forces to Europe.

IMPACT ON ALLIES OF 401ST MOVE

Senator GORTON. The 401st is now scheduled to be moved from Spain to Italy. This has been a long and tough issue within NATO. If Congress were to reverse this decision and bring the unit home and/or transfer it to the CONUS-based Reserve Forces, what do you feel would be the impact on our allies in Europe?

Mr. DUNCAN. The allies recognized that the 401st remained a key element in our common defense, and that the wing must remain in NATO's southern region. There was intense debate at NATO on this issue, and the allies bit the bullet. Defense ministers went toe-to-toe with finance ministers in many European capitals to obtain the necessary funds. Other infrastructure projects were maintained. In the end, the decision to make a special effort to keep the 401st in Europe was a triumph for the principle of equitable burdensharing, and it was made in expectation of continuing U.S. leadership and support. A decision not to approve such funding would be a serious blow to U.S. credibility in NATO and to efforts to promote greater allied burdensharing.

There are additional important policy considerations that would relate to a unilateral withdrawal of the 401st TFW caused by non-approval of U.S. funding. [Deleted.] Finally, the Italian Government has invested considerable political capital in the decision to accept the 401st. A decision to reverse ourselves would damage seriously our relationship with this steadfast ally and feed the Italian perception that the United States and NATO consider the Alliance's southern flank to be of secondary importance.

FORCE MIX

Senator GORTON. General Scheer, in a number of places in your statement for the record you say you think the mix of forces is about right. Assuming you mean the mix of Active and Reserve/Guard Forces is about right, do you still feel the mix is about right after the testimony of the CBO that savings could result from a transfer and return to the CONUS?

General SCHEER. I agree in principle with the CBO study. Cost savings will occur if we return forces to the CONUS. However, cost is but one consideration when looking at the total force mix. Currently the Air Force Reserve and Air National Guard maintain about 33 percent of the tactical fighter force. This mix has come about because of deliberate decisions based on such factors as: Ability of the Air Reserve Component to not only accomplish the mission but its appropriateness for our component, availability of forces for a non-mobilized contingency, responsiveness, pilot force management, and national security strategy. While many of these are not as quantifiable as the cost factor, they can be more important.

Senator GORTON. Are there additional factors that we should consider besides cost in trying to reach a decision on this issue?

General SCHEER. Yes, there are some other factors to be considered. Some of them are: the forward defense component of our National Security Strategy; the loss of immediate theater responsiveness; pilot absorption; and pilot retention. Additionally, in this specific case, we need to consider the Conventional Forces Europe negotiations and other NATO related issues.

NEED FOR DEFENSE SYSTEMS EQUIPMENT

Senator GORTON. Your statement is an excellent statement of the current posture, readiness, and budget requests of the Air Force Reserve. One of the shortfalls you repeat in your statement is the need for defensive systems in your forces. Are these systems bought by the Active Forces and shared, or are they systems that the Reserve Forces have to buy for themselves? Are they funded in the request before Congress?

General SCHEER. All systems development and procurement is handled by the active forces. On those occasions when special appropriations funding allows the Air Force Reserve to obtain defensive systems equipment, it is on a supplemental basis—we tender a purchase request to the agency which has already initiated the contract to exercise an option for additional procurement. More commonly, our requirements are filled as part of the central procurement, modification, and priority requisition process of the Air Force. There is no direct funding for defensive systems for the Air Force Reserve in the fiscal year 1990 budget submission. We are programmed to receive electronic countermeasure (ECM) pods, for example, both from previous special appropriation procurement efforts and through the normal procurement cycle. Procurement lag, production problems, program slippage, and the urgent need for the forward deployed force to be equipped first have all contributed to shortages across the Air Force, and are not unique to the Air Force Reserve. We are due to begin receiving pods in July purchased with the congressionally-added special appropriation effort.

RISK ASSOCIATED WITH TRANSFERS OF MISSIONS

Senator GORTON. In looking at recommendations for transfers of missions from the Active to the Reserve and Guard Forces, you have stated that you depend on former Active Forces for your forces. Is there a point of transfer at which you feel the pool of trained people is put at risk?

General SCHEER. Yes, there is a point beyond which the pool of Active duty experienced pilots can no longer sustain the experience ratio we need to continue to operate as a cost effective Reserve Force at current readiness levels. This crossover point is effected by many variables, two of the more significant being the total size of the Active duty pilot force and its cumulative continuation rate (CCR). Significant changes in either have a correspondingly major impact on this supply and demand equation. I neither know at what point the forces of supply and demand are in long term equilibrium; nor do I believe it to be the key issue. The key question must remain: what do we need to meet the threat?

Senator GORTON. Is it about right now and/or how much less can you stand?

General SCHEER. We have yet to see any change in the threat that would warrant any significant changes in the existing force mix.

ADJUSTING TO NEW MISSION ASSIGNMENTS

Senator GORTON. General Killey, from your statement for the record it appears that you too believe that the mix of forces at this time is about right. If the transfers are directed as recommended in the Options examined by the CBO, what do you feel the problems will be in adjusting to the new missions assigned and still meeting obligations to the U.S. commitments to NATO forces?

General KILLEY. The Air National Guard is fully committed to any mission which they are assigned. However, without knowing specifically which missions we will be expected to undertake, it is difficult to identify problems that might arise in meeting our commitments. Keep in mind that the Guard is a part-time force. Generally, 75 percent of our personnel are traditional Guardsmen with civilian occupations in addition to their military commitment. We are not designed to replace the active Air Force in accomplishing missions requiring high peacetime activity. Instead, we are structured, manned, and equipped to augment the Active Air Force during emergencies requiring rapid and substantial expansion of Air Force combat capability. We are not currently structured for full-time support of some of the specialized missions now being accomplished in the NATO area of responsibility. With the present force mix, the Guard is meeting the augmentation requirements of wartime activities.

AGR GRADE CEILINGS

Senator GORTON. You too use your statement as one stating your current posture and readiness. You lay out all the various missions you perform across both the federal and state taskings. Do you have any conflicts of guidance and/or legislation which you would like to bring to our attention for possible review and action?

General KILLEY. The Active Guard/Reserve (AGR) grade ceiling issue is the most important problem facing the Air National Guard in fiscal year 1990. Requested levels were reduced in fiscal year 1988 and all grade growth was denied for fiscal year 1989. Highly qualified personnel are leaving the ANG because of the perceived lack of support for this career program. The levels contained in the fiscal year 1990 President's budget are adequate to support our needs and we request congressional support.

THREAT DETECTION AND SELF-PROTECTION EQUIPMENT SHORTFALL

Senator GORTON. On pages 18–19 of your statement you discuss some of your equipment shortfalls. As do the Reserve Forces, you too appear to have a shortage of threat detection and self-protection devices. Is this shortfall funded in the current budget request or is it still an out-year item to be funded? What do you feel are the risks until this equipment is installed in your aircraft? Does the lack of this equipment limit your ability to carry out your mission, either peacetime or wartime?

General KILLEY. All procurement programs are handled by the Active Air Force for the Air National Guard and Reserve. Those addressing Electronic Countermeasure (ECM) pods; Radar/Missile Warning Receivers (RWR/MWR); and Countermeasures Dispensing Systems (chaff and flares) are funded on a multi-year basis for combined requirements. Based on the magnitude of the total force requirement and the various stages of program development, only a portion of the overall shortfall is addressed in this budget. With current funding levels, our shortfalls are not expected to be satisfied until much later in the out-years. The ECM pod modernization effort, for example, has reflected Reserve component funding in the P-1R Budget Exhibit in past years, yet procurement action has been inadequate to cover the total Active requirements. The Air National Guard has yet to receive either ALQ-184 or ALQ-131 ECM pods.

The lack of detection and self-protection equipment impacts our peacetime ability to train with the right equipment for our wartime mission. Then, of course, in any future combat involvement there will be excessive losses that could have been avoided. Less obvious is the daily risk we face in our normal operations. As I mentioned earlier, we maintain four A-7s on station in Panama and rotate a total of six C-130s through Panama and Central and South America continuously. These and many other of our world-wide missions are subject to a number of man-portable, surface to air, infra-red (IR) missile threats. Considering the major percentage of air combat losses experienced by all countries in the last 10 years were attributed to IR missiles, we know that we also are vulnerable. Because of the daily exposure in our Panama mission, one out-year program that we share a deep concern for and strongly support is the Airlift Defensive System (ADS) program being developed for the C-130.

[Whereupon, at 5:33 p.m., the committee was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1990 AND 1991

TUESDAY, JUNE 6, 1989

U.S. SENATE,
SUBCOMMITTEE ON CONVENTIONAL FORCES
AND ALLIANCE DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

EVALUATING MODERNIZATION ALTERNATIVES FOR CLOSE AIR SUPPORT

The subcommittee met in open session, pursuant to notice, at 2:30 p.m., in room SR-222, Russell Senate Office Building, Senator Alan J. Dixon presiding.

Committee members present: Senators Dixon, Levin, Shelby, Thurmond, Cohen, and Wilson.

Committee staff members present: Kathryn E. Bognovitz, special assistant, and Daniel G. Sakura, research assistant.

Professional staff members present: Sherri W. Goodman, John J. Hamre, and William E. Hoehn, Jr.

Minority staff members present: Romie L. Brownlee, deputy staff director for the minority; George W. Lauffer and Durwood W. Ringo, Jr., professional staff members.

Staff assistants present: Cindy Pearson and Kelli Pronovost.

Committee members' assistants present: Charles C. Smith, assistant to Senator Dixon; Kenneth N. Luongo, assistant to Senator Levin; Milton D. Beach, assistant to Senator Glenn; Terrence M. Lynch, assistant to Senator Shelby; Dudley L. Carlson, assistant to Senator Wilson; Anthony H. Cordesman, assistant to Senator McCain; Charles G. Pearcy, assistant to Senator Lott; and Eric H. Thoemmes, assistant to Senator Coats.

OPENING STATEMENT OF SENATOR ALAN J. DIXON

Senator DIXON. Ladies and gentlemen, this afternoon the Subcommittee on Conventional Forces and Alliance Defense meets to receive testimony on the administration's plans for evaluating alternative approaches for providing close air support for our combat forces in the future. Senator Levin has asked me to take the lead in evaluating this key issue and I am pleased to chair this hearing on behalf of the subcommittee. Close air support is perhaps the single most critical area where the military services must work together.

The Army cannot go to war in the future without confidence that its troops in combat will have close air support when they need it. Unfortunately, in recent years the question of the commitment to close air support has come into question. Last year the Armed Services Committee noted that while the Air Force plans to spend $12 to $13 billion to develop a new generation air superior fighter, it has budgeted virtually nothing to develop a new generation of close air support aircraft.

Last year I sponsored a provision which directed the Department to study the close air support mission more closely and evaluate alternative approaches for modernizing the close air support mission. The key component of my amendment called for an operational test plan for evaluating alternative aircraft that might be considered for modernizing the close air support mission, and this is the focus of today's hearing.

Before we examine the report on the test plan, the subcommittee decided that it was important to put the close air support issue in the right framework. The key question we face is this: if war were to start tomorrow, what do our ground forces need from the Air Force to win the battle?

To help the subcommittee examine this question we are pleased to welcome Gen. Glenn Otis. General Otis recently retired from Active duty after 42 years of distinguished service to this country. In his last assignment, General Otis was the most senior U.S. Army General Officer in Europe directly in command of U.S. Army troops. No one is better able to discuss what the Army needs in the area of close air support than General Otis. We have asked him to share with the subcommittee his views about what support he would expect from the Air Force and what aspects of close air support modernization this committee should emphasize.

Before we proceed, I wonder if my friend from Maine has a statement?

Senator COHEN. Not at this time, thank you.

Senator DIXON. General Otis, we are delighted you could come today and we appreciate it very much.

Senator Thurmond has a statement which he has requested be made a part of the record.

[The prepared statement of Senator Strom Thurmond follows:]

PREPARED STATEMENT OF SENATOR STROM THURMOND

Thank you Mr. Chairman: I join you in welcoming our distinguished panels to this review of the Defense Department's plans for evaluating the various alternatives for our future close air support aircraft.

There are numerous examples in the Department of Defense where the failure to properly test a concept or weapons system caused our Nation dearly in terms of expenditures and time lost in getting a critical weapon in the hands of our servicemen. Therefore, I support the concept of testing new weapons systems.

I am concerned, however, that this particular test plan will further delay a decision on a replacement for the current A-10. Our forces need a capable close air support aircraft as soon as possible. I would hope that the Department can compress this test program to permit the procurement of a modern, capable close air support aircraft as soon as possible.

Thank you, Mr. Chairman.

Senator DIXON. General Otis, please proceed.

STATEMENT OF GEN. GLENN OTIS, U.S. ARMY (RETIRED), FORMER COMMANDER, U.S. ARMY IN EUROPE

General OTIS. Thank you very much, Mr. Chairman. I am honored and privileged to appear before the subcommittee. I have a short verbal statement. Its purpose, sir, is to establish a framework of reference from which my views can hang.

For a military commander in war, his goal is to win and that means make the enemy quit. In order to do that, he really has two broad factors that he uses. One is movement and the other is fires. Fires means bringing steel to bear on the enemy.

Now, let me talk about those two just as framework. There are two parts to movement, Senator, as I look at it. One is the movement of infantry and armor-type forces to seize, hold ground, defend, and be a part of that ground force. The other element of movement is to move weapons platforms to positions of advantage where fire can be brought to bear. So those are the two parts of movement in this framework of reference.

The second element of the framework is called fires. By fires, I am talking about direct fire like rifles and machine guns and tank guns and antitank missiles, and then indirect fires like artillery and mortars and air, and air plays in both of those kind of fires.

Well, sir, that is a simple reference framework upon which to discuss the issues that you have said that this committee is to look into. I believe, sir, that the science of war is understanding the forces and their weapons and their capabilities, but the art of war is pulling those things together in time and in space and in orchestrating the whole of the panoply to do two things. First is to achieve fire and movement of the friendly force, and second is to prevent that by the enemy.

Well, with that construct, how does the Air Force fit in from a ground commander's point of view—and might I add, sir, that this ground commander has been out of uniform for 1 year, so I am a year late and a year behind and I think you should take that into consideration in whatever my responses are. But the Air Force fits into three of those four elements of the framework. First of all, the Air Force has an excellent platform of fires and it can bring both direct fire and indirect fire on the enemy. Second, in that movement equation clearly the Air Force has the flexibility and the capability to move in a wide-ranging fashion throughout the battlefield, its width and its depth.

Now, sir, when it comes to the question you asked in your opening comments about what can the Air Force do for the Army, I would answer that by rephrasing it. It is, what does the Air Force do for the joint commander, because all of our forces will be and are committed under joint commanders, not an Army commander, not an Air Force commander, not a Navy commander, but a joint commander and that is true in Europe, where the commander is not only joint but he is combined because he has the forces—air, ground, and sea—of other countries under his command.

Now, what the Air Force can do for that joint commander might be reflected with a personal example. As a combined commander at the Central Army Group, I saw the Air Force in priority, having these missions as best support in that sophisticated war arena.

Priority one: allow me freedom of movement of the ground forces, and if you translate that into Air Force-type missions, that says offensive counter-air and defensive counter-air are priority one.

Priority two: do not let the enemy have freedom of movement of his forces and his weapons systems, and if you translate that into Air Force missions, that is battlefield air interdiction, and indeed air interdiction as a general category.

Priority three: direct support of the front-line ground troops, and that is an Air Force mission of close air support.

And priority four: execution of the strategic air interdiction campaign.

Now, those are from the view of a sophisticated theater where the enemy is equipped with a wide-ranging air arm itself, and those priorities, sir, are relative—not absolute. In other words, priority four does not get zero while priority one gets all, but the marginal assets and the aspect to be considered most important starts with priority one to four.

Sir, that concludes my opening comments.

Senator DIXON. I want to thank you, General, for your comments. I wonder if the ranking member, the distinguished Senator from California, Senator Wilson, has any comment?

Senator WILSON. Thank you, Mr. Chairman, I do. First, I am pleased to welcome General Otis, for whom I have the greatest admiration and I can think of no one who can more appropriately address the subject before us from his days as a machine gunner to those when I was his guest as the Commander of the U.S. Army Forces in Europe. He has continually been concerned with support of ground troops and what we are concerned with today is a proper choice of aircraft for that close air support mission and I must say that I am gratified, as I review changes in the recent Defense Department budget, to note that 225 existing A-10 aircraft and 146 F-16s are to be modified with the automatic target hand-off system and other equipment to improve or implement their air-to-ground capability. Regardless of the mix which is finally selected for the close air support mission, the actual movement toward providing such improved capability is indicated by these modifications.

My concern, though, is how quickly we are going to get there and whether it actually is going to require, as I think we will hear in later testimony, some 42 months to achieve that. There are some basic questions that arise in the context of new ground weapons that have been developed. The ability of a shoulder-aimed weapon to bring down close air support raises some fundamental questions. The ability to develop the kind of night capability that presumably is the explanation for the 42-month time frame is one that troubles me. I would think that that is a very long time. I would hope that we might be able to expedite it.

If these seem to be somewhat contradictory, raising questions of a fundamental kind about whether the close air support as we have known it, whether that mission of the past remains the same, and at the same time wondering if we cannot accelerate an ability to conduct close air support for night operations, these are, I think, pertinent questions and I am very pleased that we have the witnesses that we have today.

General Otis, as I say, has had a career in which close air support has been anything but academic. It has been a very real thing. Among his decorations, if he were wearing his uniform, would be an expert infantryman's badge, and I am very much concerned that we ask the fundamental question and resolve it and then move on more quickly than seems to be the plan to achieve the kind of close air support that our troops deserve.

My timing was perfect. I was never fired at in anger. I think I had one squad leader that occasioned some suspicion. I was not sure if it was just an accident. I was never in combat, but I learned a healthy respect for close air support from the people who had been and it was pretty clear that if we are going to ask infantrymen to take the ground against fortified objectives and if we are going to look at the role that—the very different roles that confront us in a Korea, as opposed to a Vietnam—I think that we need to have this hearing, determine what that mix ought to be, and determine, I hope, that we can achieve in particular the night capability more rapidly than presently seems to be the plan. So I thank you, Mr. Chairman, for holding the hearing and I thank the witnesses for being here. General, it is good to see you again.

General OTIS. Thank you, sir.

Senator DIXON. Thank you very much, Senator. I believe under the early bird rule, Senator Cohen, if you have no questions at this time, Senator Thurmond?

Senator THURMOND. Thank you, Mr. Chairman. General Otis, I am glad to see you again.

General OTIS. Thank you, sir.

Senator THURMOND. I believe the last time I saw you was in Germany and you were on Active duty and performing a great service to our country.

A-10

General Otis, the Air Force and the Army have been debating the replacement for the A-10 since 1984, I believe. Although they have reached an interim solution by modifying some A-10s and F-16s for the close air support role, it appears that a final solution is still some time in the distant future. In your opinion, how time sensitive is the close air support issue in terms of our war-fighting capability in Europe?

General OTIS. Close air support, sir, is required today and of course it is available today, but it is not available in all forms at night and so it is an urgent requirement that there be the capability to have close air support of ground forces day and night.

CRITICAL SHORTFALLS

Senator THURMOND. General Otis, based upon your experience as a Commander of U.S. Army Forces in Europe, what was the most critical shortfall of the close air support aircraft that supported your forces?

General OTIS. Not enough of them, sir, and that is not a facetious remark at all. In Europe, as you very well know, Senator, the forces that are deployed there may have to be the forces that fight the initial battles and there simply are not enough. But given those constrained forces, both ground and air, the thing that is needed more than anything else is the capability for air to do all of its missions and hence the shortfall of close air support is really a shortfall of being able to re-role aircraft among the various missions of the Air Force.

OPERATION AND TEST PLAN

Senator THURMOND. General Otis, the operation and test plan calls for the Army to design and conduct a test. The testing, as proposed, would most likely take place at Fort Hood, Texas, where there is a large concentration of forces and a large training area. Do you agree with the proposal, and the proposal of the ideal place to conduct this test, considering the climactic conditions differ so much from those in Germany where the close air support aircraft are most likely to be employed?

General OTIS. I agree with the location of the test, Senator. I think the issue of weather is one that does not discriminate among aircraft, but rather whether or not the aircraft can fly and fully perform its mission, and so I do not think that is the major issue on weather at Fort Hood.

Senator THURMOND. Thank you very much, Mr. Chairman. That is all I have at this time.

NIGHTTIME CLOSE AIR SUPPORT

Senator DIXON. Thank you, Senator. General Otis, I know in the future the Army envisions fighting more at night and you have spent a lot of money to fight at night, buying night vision goggles and so on. Can the Air Force fly nighttime close air support right now?

General OTIS. To some degree, yes, Senator it can. But of course, it has to have artificial illumination so you have destroyed the non-illumination requirement of the ground forces, so there is a mixed bag there.

Senator DIXON. How important is it to you that the Air Force have the ability to fly close air support missions at night?

General OTIS. Extremely.

Seantor DIXON. Let me ask you this. Is there any advantage in giving the close air support mission to the Army, rather than keeping it with the Air Force, in your opinion?

General OTIS. In my opinion, no, sir.

CAS/BAI

Senator DIXON. General, the Air Force makes a distinction between close air support and battlefield air interdiction, and as I understand it, close air support involves missions directly in conjunction with U.S. troop movements, while battlefield air interdiction involves attacking targets in the enemy's rear. Does the Air Force adequately support the Army today in the area of close air support, in your opinion?

General OTIS. My short answer is yes for the general question you ask. But it has to be caveated by saying, one, we need more; two, we need to fight at night; and three, if the weapons systems are single-role aircraft only, then it takes away from flexibility, and that is what we really have today with the A–10 and in essence with the Alpha jet from the German side.

Senator Dixon. How about battlefield air interdiction, General?

General Otis. Yes. I need to address that with one extra remark. Part of battlefield air interdiction is going after enemy artillery. Now that enemy artillery is firing into the front lines by indirect fire anywhere from 5 to 20 kilometers behind the front lines, that is part of battlefield air interdiction to go after that artillery even though the fires are those in close proximity to friendly troops and we need that capability. In Europe, our plans are that the Air Force will perform that mission. Not exclusively, of course, but in conjunction with ground forces.

AIR FORCE SUPPORT OF GROUND BATTLE

Senator Dixon. In your opinion, how can the Air Force best support the ground battle in the very first days of a war?

General Otis. In the first 2 to 3 days of the war, sir, the Air Force can best support the ground force, and that is the NATO Allied Air Force against—for the NATO command—by keeping the enemy air off the ground commander's back. That translates to offensive counter-air and defensive counter-air and that ought to be the first priority for the first 2 or 3 days of the war, in my opinion.

Senator Dixon. Senator Wilson.

HAND-HELD WEAPONS

Senator Wilson. Thank you, Mr. Chairman. General Otis, let me ask you a fundamental question and let me ask you to apply it specifically to the aircraft under consideration here. We have a Stinger, other forces has a version of a shoulder-aimed weapon. How has that affected the close air support mission and our ability to conduct it?

General Otis. Senator, I think that the Stinger and the Blowpipe and the hand-held front line weapons have affected the enemy's close air support against us in a very real way. He knows that the Stinger is going to take out his aircraft big time, as do the other hand-held front line air defenses. But of course he has some of those same kind of things in his hip pocket, so that the front lines are going to be a very lethal battle area.

Now, to the extent that we visualize close air support as the two sides on a bald battlefield like this table, and both sides are waiting while aircraft come in to do the bombing, we have got an unrealistic picture and one in which there would indeed be high attrition rates on aircraft on both sides.

On the other hand, if you train as the Air Force and the ground forces are now training, so that when these two forces face each other, artillery fires come in constantly making the enemy button up, those hand-held Stingers—the Russian version—have no capability for protection. When the artillery is coming in with VT-fuse, they are suppressed, as are the ZSU–23–4s, and so on, and as long as we get the orchestration of artillery, ground and air in a synchronized way, close air support is indeed a feasible option and indeed a required one.

Senator WILSON. What you are saying is, to have close air support in that environment you have to have it supported by artillery in order to suppress those ground troops?

General OTIS. Yes, sir.

Senator WILSON. From your answer, I gather that you think that we are better equipped to do that than the other side?

General OTIS. Better equipped to do close air support? I did not understand the question.

Senator WILSON. Well, you said that you think that the introduction of the hand-held weapon has made a very significant difference in terms of our ability to inhibit close air support by our enemies. Is not the converse true as well?

General OTIS. Yes, except ours are better but he has more of his.

Senator WILSON. We have a better hand-held weapon, more accurate?

General OTIS. Yes.

Senator WILSON. But essentially, both the dynamics are at play on both sides?

General OTIS. That's correct.

A-10

Senator WILSON. Your comment related to the A-10 a moment ago. I am not sure I was quite clear. Are you saying that we need a mix of A-10s and F-16s? You made a comment about there being a limitation in value to an aircraft that is limited in function. I gather that you mean we have to have, as a close air support, one that has a dog-fighting capability as well?

General OTIS. My comment, sir, would mean this. If we could go back to square one and ask ourselves what is the best way to support the ground force, we would not come up with a single-mission close air support aircraft, but rather one that can do close air support, battlefield air interdiction, and air interdiction. Now perhaps it would not be optimized for air-to-air combat and so I would not allege that, but the particular air frame I would certainly leave up to the Air Force. But from a ground commander's point of view, to put single purpose weapons on air frames severely limits the flexibility that one might otherwise have.

BATTLEFIELD AIR INTERDICTION

Senator WILSON. Let me be clear about the terms that you are using. I understand what is meant by close air support and just a moment ago you gave an example that by battlefield air interdiction you mean the mission whereby aircraft attack artillery that are firing from 5 to 25 kilometers from the actual battlefield. Is that the full range?

General OTIS. No, sir. In battlefield air interdiction the definition out of our Joint Chiefs of Staff publication says that battlefield air interdiction is the attack of enemy ground targets that are not in close proximity to the friendly forces but have the capability of entering the fray shortly and therefore the attack of those targets does not require direct intervention with ground forces, whereas close air support requires direct coordination and control with the ground forces.

AIRCRAFT MIX

Senator **Wilson**. We are looking today at an A-10, or the possibility of an upgraded version of the A-7, the YAF; we are looking at the F-16 modified for that close air support mission. What is your view? Do we need a mix of these, and why? Or is there one that you would favor?

General **Otis**. I am afraid I am not qualified to answer the question the way it was asked, sir. I would say that if A-10s are a single mission aircraft, that is close air support only, then I do not like an A-10. I would much rather have another aircraft that could do also BAI as a minimum, in addition to close air support.

Senator **Wilson**. Thank you.

Senator **Dixon**. Thank you, Senator Wilson. Senator Shelby.

ROTARY WING AIRCRAFT

Senator **Shelby**. Thank you, Mr. Chairman. Do you have any plans, General Otis, to integrate the rotary wing, say the Apache aircraft, into the close air support mission?

General **Otis**. We do not call it close air support, Senator, but we have been——

Senator **Shelby**. What is the proper term?

General **Otis**. What we call it is JAAT—joint air attack training—and that is a combination. The synchronization, not the takeover of one role or another by the helicopter, but using helicopters, artillery, and fixed wing together in a synchronized unit.

Senator **Shelby**. Close air support?

General **Otis**. Yes, sir.

Senator **Shelby**. Would it follow, though, that the rotary wing could provide tremendous air support there? It looks to me like you could.

General **Otis**. It sure does.

Senator **Shelby**. Do you know how much has gone into the test on the use of the rotary wing?

General **Otis**. We have done an awful lot of testing of the rotary wing, Senator.

Senator **Shelby**. Very positive, too, is it not?

General **Otis**. All positive.

Senator **Shelby**. Do you plan to try to expand the number of, say Apaches, rotary wing, that would be utilized in this type function?

General **Otis**. Senator, I do not know. I am a year out and have no knowledge of that. Could I add one more part to your previous question? The testing that we have done in Air Force and Army working together have shown that if you put artillery, helicopter gun ships, and Air Force fixed wing aircraft synchronized on a battlefield, all three of them survive better and the enemy attrition is better than the sum of the three taken by themselves.

Senator **Shelby**. If you use them all? If you integrate them and use them?

General **Otis**. Yes, and that is what we call JAAT.

Senator **Shelby**. If you could speak singularly just for a minute, how effective is the rotary wing aircraft in the air support, compared to artillery and the other? Can you put a comparison there?

General OTIS. Yes, sir. I would tell you that in the traditional role of close air support I would not use the helicopter. I would put the helicopter on the flanks. I would put it into the enemy rear at appropriate times. I would use it at night. But to use it naked only for close air support, it is a heck of a lot more vulnerable.

Senator SHELBY. But on the flanks and at night it is very useful, is it not?

General OTIS. Yes, sir.

Senator SHELBY. And very effective?

General OTIS. Yes, sir.

Senator SHELBY. That is where you would expect breakthroughs, would you not, on the flank—at least hopefully?

General OTIS. I do not expect any breakthroughs, Senator.

Senator SHELBY. That is a good answer, but it is one that would bother a lot of us. But I do appreciate your candor anyway, General.

General OTIS. Thank you, sir.

Senator SHELBY. Thank you, Mr. Chairman.

Senator WILSON. Could I pick up on that?

Senator DIXON. Yes. Senator Wilson.

HELICOPTER VULNERABILITY

Senator WILSON. On the point Senator Shelby raised, General Otis, the obvious vulnerability of the helicopters is a concern. The tactic of having them pop up from a defilade position so that they can go after tanks has, I think, a great appeal, particularly if, as I understand it, the attack angle for fixed wing aircraft is one in which they are most vulnerable. If we are talking about tanks alone, and attacking tanks, would you compare for us the comparative effectiveness and vulnerability of helicopters, the Apache, and let us say the F–16 or the A–10?

General OTIS. I will try, Senator, but it takes a lot of caveats. First of all, in its mode of hovering behind the hill mass or the tree line, the helicopter can expose itself for a very short time, especially the Apache, which has a fire-and-forget missile, given that you have a laser designator up front, and so that gives us quite a sense of protection. On the other hand, it is in an envelope where the enemy tank can shoot down the helicopter.

Now, let us reverse that—and furthermore, in general it is firing in a machine that looks at the tank in the frontal 120 degree arc. Now we go to the air. The air arm does not hover—the Air Force. It is going at a relatively fast speed. That gives it some protection. Moreover, it is attacking from the top, at least from an angle, where the tank—the enemy tank—is most vulnerable.

So given tanks alone, each of those two kinds of weapons platforms has an advantage and disadvantage.

Senator WILSON. So on net balance, what would be your advice to the committee in terms of trying to develop an antitank capability, air capability?

General OTIS. Number one, sir, when we improved our helicopters and got really good antitank capability on them, it was not to replace something, it was because we were out-numbered and outgunned and by doing this we would close that margin of inequality in numbers with a quality aspect. There was no thought that that was the way to take over close air support, but rather it was to add to the lethality of the U.S. forces on the battlefield. I think that still holds true, sir.

The close air support, where you are stripping not only tanks but infantry and electronic warfare and enemy air defenses and their intelligence assets, all of those are somewhere in those front line forces and directly behind them and you cannot, with a helicopter, put the fire power out that you will with a good close air support aircraft.

But finally, sir, the weapons that can knock out a A-10, for example, or a German Alpha jet or an F-16, and those that can knock out a helicopter, have to be able to shoot at it and wherever you are making the attacks—by helicopter or fixed wings—it ought to be done in conjunction with the other arms that put out the suppressive fires. A tank, when he is buttoned up, is no good trying to shoot at an aircraft and you can keep him buttoned up with artillery, or mortars, or even rifle fire—machineguns.

Senator WILSON. Thank you, General.

Senator DIXON. Thank you, Senator Wilson. Thank you very much, General Otis. We appreciate that. We will go on to a second panel now, and we thank you very much for your important contribution. You have been most kind.

We will now ask our second panel to take their seats and we will now hear from representatives of the Department of Defense. The testimony will focus on the test plan which was directed in last year's authorization bill. Our witnesses are Hon. John Krings, Director, Office of Operational Test and Evaluation; Mr. Frank Kendall, Acting Deputy Director of Defense Research and Engineering for Tactical Warfare; and Brig. Gen. Joe Ralston, Director of Plans, U.S. Air Force Tactical Air Command.

In addition, we have two backup witnesses who may be called on later, if necessary, and they are Maj. Gen. Rudi Ostovich, Deputy Chief of Staff for Doctrine, U.S. Training and Doctrine Command, and Brig. Gen. Arthur C. Blades, Assistant Deputy Chief of Staff for Aviation, U.S. Marine Corps. Both Mr. Krings and Mr. Kendall have submitted written statements as requested. Mr. Krings, I believe you are going to begin, is that correct?

STATEMENT OF HON. JOHN E. KRINGS, DIRECTOR, OPERATIONAL TEST AND EVALUATION, OFFICE OF THE SECRETARY OF DEFENSE

Mr. KRINGS. Yes, sir. Mr. Chairman, members of the committee, I am here to discuss the close air support operational test plan concept. You asked me to prepare a competitive fly-off of alternative aircraft for the close air support, or CAS, mission. The completed test plan was provided to Congress on March 31 as you requested.

The plan was created by a group of experts in our organization. Two of them are with me today. Dr. Ernest Seglie is my science advisor and is probably the most experienced tester in close air support in air defense issues who we have in this country. He has been involved in tactical aircraft effectiveness and survivability tests, the Sergeant York tests, ADATS tests, the more recent pedestal-mounted Stinger tests, to name a few; and I have with me Col. John Benson, who is an Army helicopter test pilot with operational experience as an infantry unit commander and observation helicopter instructor pilot. In addition, Air Force Col. Don Brown, an experienced Air Force A-10 pilot, provided first-hand insights into close air support operations to prepare this plan.

My personal initial introduction to CAS came in 1954 as an Air Force pilot and I have trained and flown most CAS airplanes in the last 30 years. Some are better than others, obviously. I propose a sequence of two tests that will allow an unbiased assessment of each alternative as they perform the CAS mission against a common threat and a target base. They will be evaluated across a wide range of tactical situations from low to high intensity.

The first test will be a quick-look limited set of trials that could be flown within 12 to 18 months to decide which aircraft should not be modified for a competitive fly-off. This test can be conducted using current or surrogate aircraft without investing in production representative versions of each alternative.

The time span you were talking about earlier, the 42 months, is the time and money to modify aircraft for the second test. The test aircraft in the first test will be the A-10, the A-7, really used as a potential surrogate for a reengined or unengined A-10, and the A-16, using an F-16.

The test is modular in design. Other aircraft—any type of aircraft, or conceivably any other vehicle, may be directed to participate with an associated increase in cost and time. The test will emphasize day CAS operations while providing an opportunity to explore night operations. They will be based on three tactical situations in the central European scenario. This early operational test planned for Fort Hood, Texas, will measure the candidate's effectiveness in killing assigned targets, in addition to their ability to survive in getting to the target and returning to their base.

The estimated cost of this Phase One test is $45 million in fiscal year 1990 and $5 million in fiscal year 1991. Given the large ground force required for this test and the use of an operational Army post as a test site, I recommended that the Army, as the users of CAS, should assure responsibility for the detailed planning and execution of the test. Evaluation of the test results will be performed by my office. Obviously, any selection of aircraft is the responsibility of the Air Force.

The Phase Two competitive fly-off test would be a side-by-side comparison of designated alternative aircraft with advanced systems in a comparable state of maturity. The test articles would be selected by the Secretary of Defense. According to the Air Force estimates, it will take approximately 42 months after completion of the first test to modify and flight qualify potential candidate aircraft for this second test. This test will emphasize night and limited visibility operations in a robust, combat environment.

The trials for the competitive fly-off will be based on the nine tactical situations associated with Central European, Middle East, Southwest Asian and Central and South American scenarios described in the plan. Relative effectiveness will be determined against the user's requirement—what the CAS will provide to the

Army—of responsiveness, effectiveness in killing assigned targets, and survivability.

The estimated cost of Phase Two is $75 million over fiscal years 1992 through 1995 and this does not include the cost of modification of an aircraft. This is the cost of the execution of the test.

Current legislation prohibiting contractor involvement in operational tests may significantly delay the start dates for these tests. We will continue to work with you to address this issue as it pertains to this test and other operational tests.

Realistic operational scenarios are critical to the credibility of the tests. Visits were made to a number of CAS user organizations with Army, Air Force, Marine Corps, and NATO personnel. Discussions focused on the process by which calls for fire support were eventually translated into requests for CAS. We confirmed the tactical situations selected for this test and identified the type and approximate location of targets that would likely be attacked by CAS aircraft. These visits enabled the development of realistic scenarios for the test. I believe that man-in-the-loop simulation will play a major role in the planning and conduct of both tests. It will assist in the design of the test and could serve as an adjunct—an important adjunct to test execution. Manned simulation has the potential to save valuable resources during these tests.

This plan was developed in consultation with the Army Operational Test and Evaluation Agency, the Air Force Operational Test and Evaluation Center, and the Marine Corps Test and Evaluation Activity. In addition, Gen. Glenn Otis, who was here with us just recently, former Commander-in-Chief of the U.S. Army, Europe, served as an advisor to provide me a separate assessment of this plan.

During the preparation of this plan, I discussed its content with the Chiefs of Staff of the Army and the Air Force and the Vice Chairman and Joint Chiefs of Staff. Service and JCS comments were solicited and incorporated where appropriate. Suggestions were also received from principal staff members within the Office of the Secretary of Defense.

There were concerns raised during our dialogue with these agencies. One, it was asserted that the test would not be valid if it did not address battlefield air interdiction. Congress focused our test planning efforts on the CAS mission. A multi-role aircraft with CAS as a primary mission must be capable of performing CAS effectively in addition to any other missions, as General Otis discussed the requirement for multi-role aircraft just a few moments ago. The capability of selected aircraft to perform the battlefield air interdiction mission can be and should be evaluated. The test I proposed would have to be expanded significantly to add air and ground assets that would be representative of the threat arrayed against the battlefield air interdiction mission and the friendly force package required to accomplish this mission. I believe the effectiveness of these aircraft in performing battlefield air interdiction should be the objective of a separate test.

The second assertion was that conducting the test would delay fielding of aircraft. I do not believe the test delays any acquisition program. The Phase One test offers an opportunity to provide unbiased insights into several basic issues relating to CAS, such as the lethality of manned portable SAM threats, tradeoffs between speed and altitude on target acquisition and aircraft survivability, the impact of size and agility on aircraft survivability, and the effects of enhanced cueing in an operational environment. The results can only aid in the selection of a correct solution. The Phase Two can actually be conducted in conjunction with the operational test that will be performed on the selected aircraft.

It was also asserted that the wrong service was selected to conduct the test. I recommended that the Army plan and conduct the test based on the large number of ground forces, the proposed use of Fort Hood, and the fact that Army ground forces are the primary users of CAS. They also have extensive experience in the other side of CAS, which is Army air defense.

It was asserted that the AV-8B should be in the Phase One tests. A night attack version of the AV-8B is about to be fielded. This aircraft would not require major modifications to be a participant in the competitive fly-off. To keep the cost and duration of the test as low as possible, the AV-8B was not included.

I might add at this point, we are the testers. We provide the environment and the opportunity to test. We do not dictate what comes to the test. We just try to provide the situation and the environment to evaluate and we have a plan whereby aircraft, or any other vehicle, could be added to the test incrementally, sort of as a module. The test is modular in design and additional aircraft may be directed to participate with the associated increase in cost and time. Basically, it is 3 weeks and $4.5 million for every other type vehicle that you add—another aircraft, or whatever the other vehicle might be.

It was asserted that the instrumentation required to accurately measure engagements is not currently available. Instrumentation in the services for this type of testing is not as capable as we would like it to be. On-going tests suffer from this limitation. We have recognized the problem and have attempted to correct it. I proposed a capabilities improvement program that includes funds specifically addressing this current instrumentation deficiency. That is at the hands of Congress at this point in time.

Because of the concerns I have summarized, the CAS operational test which I have described is not supported in one aspect or another by the services or staff elements in OSD. There is consensus that the Army should plan and conduct the test except from the Air Force.

The funding for this CAS operational test appears in DOT&E, our fiscal years 1990 and 1991 budget. This operational test will investigate the critical issues which I mentioned earlier. They are the lethality of the manned portable SAM threats, the trade-offs of speed and altitude on target acquisition and survivability, the impact of size and agility on aircraft survivability, and the incremental effects of enhanced cueing. However, pursuing only these issues would make the test more controlled and developmental than operational. I firmly believe that the CAS test I proposed will provide insights into these basic CAS issues.

In summary, our challenge was to design a test that would accurately reflect the environment where CAS is actually performed. I feel confident that we have done that.

Thank you, Mr. Chairman. I will try to answer any questions you might have.

[The prepared statement of Mr. Krings follows:]

STATEMENT OF: HONORABLE JOHN E. KRINGS
Director, Operational Test and Evaluation
Department of Defense

MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE, I AM HERE TO DISCUSS THE CLOSE AIR SUPPORT OPERATIONAL TEST PLAN CONCEPT.

YOU ASKED ME TO PREPARE A COMPETITIVE FLY-OFF, OF ALTERNATIVE AIRCRAFT, FOR THE CLOSE AIR SUPPORT, OR CAS MISSION. THE COMPLETED TEST PLAN WAS PROVIDED TO CONGRESS ON MARCH 31 AS REQUESTED.

THE TEST PLAN WAS CREATED BY A GROUP OF EXPERTS IN OUR ORGANIZATION. DR. ERNEST SEGLIE IS MY SCIENCE ADVISOR AND IS PROBABLY THE MOST EXPERIENCED TESTER IN CLOSE AIR SUPPORT AND AIR DEFENSE ISSUES THAT WE HAVE IN THIS COUNTRY. HE HAS BEEN INVOLVED WITH THE TACTICAL AIRCRAFT EFFECTIVENESS AND SURVIVABILITY EVALUATION (TASVAL) TESTS, THE SERGEANT YORK TESTS, THE ADATS TESTS AND THE PEDESTAL MOUNTED STINGER TESTS TO NAME JUST A FEW. COL. JOHN BENSON IS AN ARMY HELICOPTER TEST PILOT WITH OPERATIONAL EXPERIENCE AS AN INFANTRY UNIT COMMANDER AND OBSERVATION HELICOPTER INSTRUCTOR PILOT. IN ADDITION, COL. DON BROWN, AN EXPERIENCED AIR FORCE A-10 PILOT PROVIDED FIRST-HAND INSIGHTS INTO CLOSE AIR SUPPORT OPERATIONS. MY INITIAL INTRODUCTION TO CAS CAME IN 1954 AS AN AIR FORCE PILOT AND I HAVE TRAINED FOR THE MISSION IN MANY AIRCRAFT TYPES (SOME BETTER THAN OTHERS) OVER A PERIOD OF 30 YEARS.

I PROPOSE A SEQUENCE OF TWO TESTS THAT WILL ALLOW AN UNBIASED ASSESSMENT OF EACH ALTERNATIVE, AS THEY PERFORM THE

CAS MISSION AGAINST A COMMON THREAT AND TARGET BASE. THEY WILL BE EVALUATED ACROSS A WIDE RANGE OF TACTICAL SITUATIONS FROM LOW TO HIGH INTENSITY.

THE FIRST TEST WILL BE A QUICK-LOOK, LIMITED SET OF TRIALS, THAT COULD BE FLOWN WITHIN 12 TO 18 MONTHS, TO DECIDE WHICH AIRCRAFT SHOULD NOT BE MODIFIED FOR A COMPETITIVE FLY-OFF. THIS TEST CAN BE CONDUCTED USING CURRENT OR SURROGATE AIRCRAFT WITHOUT INVESTING IN PRODUCTION REPRESENTATIVE VERSIONS OF EACH ALTERNATIVE.

TEST AIRCRAFT WILL BE THE A-10, THE A-7 (AS A POTENTIAL SURROGATE FOR A RE-ENGINED A-10) AND THE A-16. THE TEST IS MODULAR IN DESIGN. OTHER AIRCRAFT TYPES MAY BE DIRECTED TO PARTICIPATE WITH AN ASSOCIATED INCREASE IN COST AND TIME. TESTS WILL EMPHASIZE DAY CAS OPERATIONS, WHILE PROVIDING AN OPPORTUNITY TO EXPLORE NIGHT OPERATIONS. THEY WILL BE BASED ON THE THREE TACTICAL SITUATIONS IN THE CENTRAL EUROPEAN SCENARIO. THIS EARLY OPERATIONAL TEST, PLANNED FOR FT. HOOD, TEXAS, WILL MEASURE THE CANDIDATES' EFFECTIVENESS IN KILLING ASSIGNED TARGETS, IN ADDITION TO THEIR ABILITY TO SURVIVE IN GETTING TO THE TARGET AND RETURNING TO THEIR BASE. THE ESTIMATED COST OF THE PHASE I TEST IS $45M IN FY90 AND $5M IN FY91.

GIVEN THE LARGE GROUND FORCES REQUIRED FOR THIS TEST AND THE USE OF AN OPERATIONAL ARMY POST AS A TEST SITE, I HAVE RECOMMENDED THAT THE ARMY, AS THE USERS OF CAS, SHOULD BE RESPONSIBLE FOR THE DETAILED PLANNING AND EXECUTION OF THIS TEST. EVALUATION OF THE TEST RESULTS WILL BE PERFORMED BY MY OFFICE. OBVIOUSLY, ANY SELECTION OF AIRCRAFT IS THE

RESPONSIBILITY OF THE AIR FORCE.

THE PHASE II COMPETITIVE FLY-OFF TEST WILL BE A SIDE-BY-SIDE COMPARISON OF DESIGNATED ALTERNATIVE AIRCRAFT WITH ADVANCED SYSTEMS IN A COMPARABLE STATE OF MATURITY. THE TEST AIRCRAFT WOULD BE SELECTED BY THE SECRETARY OF DEFENSE. ACCORDING TO AIR FORCE ESTIMATES, IT WILL TAKE APPROXIMATELY 42 MONTHS AFTER COMPLETION OF THE FIRST TEST TO MODIFY AND FLIGHT QUALIFY POTENTIAL CANDIDATE AIRCRAFT FOR THIS TEST. THIS TEST WILL EMPHASIZE NIGHT AND LIMITED VISIBILITY OPERATIONS IN A ROBUST COMBAT ENVIRONMENT.

THE TRIALS FOR THE COMPETITIVE FLY-OFF WILL BE BASED ON THE NINE TACTICAL SITUATIONS ASSOCIATED WITH THE CENTRAL EUROPEAN, MIDDLE EAST/SOUTHWEST ASIAN AND CENTRAL/SOUTH AMERICAN SCENARIOS DESCRIBED IN THE PLAN. RELATIVE EFFECTIVENESS WILL BE DETERMINED AGAINST THE USER'S REQUIREMENTS OF RESPONSIVENESS, EFFECTIVENESS IN KILLING ASSIGNED TARGETS AND SURVIVABILITY. THE ESTIMATED COST OF THE PHASE II TEST IS $75M OVER FY92-95.

CURRENT LEGISLATION PROHIBITING CONTRACTOR INVOLVEMENT IN OPERATIONAL TESTING MAY SIGNIFICANTLY DELAY THE START DATES FOR BOTH TESTS. WE WILL CONTINUE TO WORK WITH YOU TO ADDRESS THIS ISSUE AS IT PERTAINS TO THIS AND OTHER OPERATIONAL TESTS.

REALISTIC OPERATIONAL SCENARIOS ARE CRITICAL TO THE CREDIBILITY OF THESE TESTS. VISITS WERE MADE TO A NUMBER OF CAS USER ORGANIZATIONS WITH ARMY, AIR FORCE, MARINE CORPS AND NATO PERSONNEL. DISCUSSIONS FOCUSED ON THE PROCESS BY WHICH CALLS FOR FIRE SUPPORT WERE EVENTUALLY TRANSLATED INTO REQUESTS

FOR CAS. WE CONFIRMED THE TACTICAL SITUATIONS SELECTED FOR THIS TEST, AND IDENTIFIED THE TYPE AND APPROXIMATE LOCATION OF TARGETS THAT WOULD LIKELY BE ATTACKED BY CAS AIRCRAFT. THESE VISITS ENABLED THE DEVELOPMENT OF REALISTIC SCENARIOS FOR THE TESTS.

I BELIEVE THAT MAN-IN-THE LOOP SIMULATION WILL PLAY A MAJOR ROLE IN THE PLANNING AND CONDUCT OF BOTH TESTS. IT WILL ASSIST IN THE DESIGN OF THE TESTS AND COULD SERVE AS AN IMPORTANT ADJUNCT TO TEST EXECUTION. MANNED SIMULATION HAS THE POTENTIAL TO SAVE VALUABLE RESOURCES IN THESE TESTS.

THIS PLAN WAS DEVELOPED IN CONSULTATION WITH THE ARMY OPERATIONAL TEST AND EVALUATION AGENCY, THE AIR FORCE OPERATIONAL TEST AND EVALUATION CENTER AND THE MARINE CORPS TEST AND EVALUATION ACTIVITY. IN ADDITION, GENERAL GLENN OTIS, FORMER COMMANDER-IN-CHIEF, U.S. ARMY, EUROPE, SERVED AS AN ADVISOR TO PROVIDE ME A SEPARATE ASSESSMENT OF OUR PLAN.

DURING THE PREPARATION OF THIS PLAN, I DISCUSSED ITS CONTENT WITH THE CHIEFS OF STAFF OF THE ARMY AND THE AIR FORCE AND THE VICE CHAIRMAN, JOINT CHIEFS OF STAFF. SERVICE AND JCS COMMENTS WERE SOLICITED AND INCORPORATED WHERE APPROPRIATE. SUGGESTIONS WERE ALSO RECEIVED FROM PRINCIPAL STAFF MEMBERS WITHIN THE OFFICE OF THE SECRETARY OF DEFENSE.

CONCERNS WERE RAISED DURING OUR DIALOGUE WITH THESE AGENCIES:

I. IT WAS ASSERTED THAT THE TEST WOULD NOT BE VALID IF IT DID NOT ADDRESS BATTLEFIELD AIR INTERDICTION (BAI).

CONGRESS FOCUSED OUR TEST PLANNING EFFORTS ON THE CAS MISSION. A MULTI-ROLE AIRCRAFT WITH CAS AS A PRIMARY MISSION MUST BE CAPABLE OF PERFORMING CAS EFFECTIVELY, IN ADDITION TO ANY OTHER MISSIONS.

THE CAPABILITY OF THE SELECTED AIRCRAFT TO PERFORM THE BAI MISSION CAN AND SHOULD BE EVALUATED. THE TEST I HAVE PROPOSED WOULD HAVE TO BE EXPANDED SIGNIFICANTLY TO ADD AIR AND GROUND ASSETS (BOTH ENEMY AND FRIENDLY) THAT WOULD BE REPRESENTATIVE OF THE THREAT ARRAYED AGAINST A BAI MISSION AND THE FRIENDLY FORCE PACKAGING REQUIRED TO ACCOMPLISH THE MISSION. I BELIEVE THE EFFECTIVENESS OF THESE AIRCRAFT IN PERFORMING BAI SHOULD BE THE OBJECTIVE OF A SEPARATE TEST.

2. THE SECOND ASSERTION WAS CONDUCTING THE TEST WOULD DELAY FIELDING AN AIRCRAFT.

I DO NOT BELIEVE THE TEST DELAYS ANY ACQUISITION PROGRAM. THE PHASE I TEST OFFERS THE OPPORTUNITY TO PROVIDE UNBIASED INSIGHTS INTO SEVERAL BASIC ISSUES RELATING TO CAS, SUCH AS THE LETHALITY OF THE MAN-PORTABLE SAM THREAT, TRADEOFFS BETWEEN SPEED AND ALTITUDE ON TARGET ACQUISITION AND AIRCRAFT SURVIVABILITY, THE IMPACT OF SIZE AND AGILITY ON AIRCRAFT SURVIVABILITY AND THE EFFECTS OF ENHANCED CUEING IN AN OPERATIONAL ENVIRONMENT. THE RESULTS CAN ONLY AID IN THE SELECTION OF THE CORRECT SOLUTION. THE PHASE II TEST CAN ACTUALLY BE CONDUCTED WITH THE OPERATIONAL TEST THAT WILL BE PERFORMED ON THE SELECTED AIRCRAFT.

3. IT WAS ALSO ASSERTED THAT THE WRONG SERVICE WAS SELECTED TO CONDUCT THE TEST.

I RECOMMENDED THAT THE ARMY PLAN AND CONDUCT THE TEST BASED ON THE LARGE NUMBER OF GROUND FORCES, THE PROPOSED USE OF FT. HOOD, AND THE FACT THAT ARMY GROUND FORCES ARE THE PRIMARY USERS OF CAS.

4. IT WAS ASSERTED THAT THE AV-8B SHOULD BE IN THE PHASE I TEST.

A NIGHT ATTACK VERSION OF THE AV-8B IS ABOUT TO BE FIELDED. THIS AIRCRAFT WOULD NOT REQUIRE MAJOR MODIFICATIONS TO BE A PARTICIPANT IN A COMPETITIVE FLY-OFF. TO KEEP THE COST AND DURATION OF THE TEST AS LOW AS POSSIBLE, THE AV-8B WAS NOT INCLUDED. HOWEVER, THE TEST IS MODULAR IN DESIGN AND ADDITIONAL AIRCRAFT MAY BE DIRECTED TO PARTICIPATE WITH THE ASSOCIATED INCREASE IN COST AND TIME.

5. IT WAS ASSERTED THAT THE INSTRUMENTATION REQUIRED TO ACCURATELY MEASURE ENGAGEMENTS IS NOT CURRENTLY AVAILABLE.

THE INSTRUMENTATION IN THE SERVICES FOR THIS TYPE OF TESTING IS NOT AS CAPABLE AS WE WOULD LIKE IT TO BE. ONGOING TESTS SUFFER FROM THIS LIMITATION. WE HAVE RECOGNIZED THIS PROBLEM AND HAVE ATTEMPTED TO CORRECT IT. I PROPOSED A CAPABILITIES IMPROVEMENT PROGRAM THAT INCLUDES FUNDS SPECIFICALLY ADDRESSING THIS CURRENT INSTRUMENTATION DEFICIENCY. TO DATE THESE FUNDS HAVE NOT BEEN RELEASED. I STRONGLY URGE THAT THESE FY89 FUNDS BE RELEASED IMMEDIATELY TO ALLOW US TO PREPARE FOR THIS CAS TEST AND TO ACCOMPLISH OTHER IMPORTANT UPCOMING TESTS.

BECAUSE OF THE CONCERNS I HAVE SUMMARIZED, THE CAS OPERATIONAL TEST WHICH I HAVE DESCRIBED IS NOT SUPPORTED, IN ONE ASPECT OR ANOTHER, BY THE SERVICES OR STAFF ELEMENTS IN OSD. THERE IS CONSENSUS THAT THE ARMY SHOULD PLAN AND CONDUCT THE TEST EXCEPT FROM THE AIR FORCE. THE FUNDING FOR THIS CAS OPERATIONAL TEST APPEARS IN THE DOT&E FY90 AND 91 BUDGET. THIS OPERATIONAL TEST WILL INVESTIGATE THE CRITICAL ISSUES WHICH I MENTIONED EARLIER. THOSE ARE: THE LETHALITY OF THE MAN-PORTABLE SAM THREATS, THE TRADE-OFF SPEED AND ALTITUDE ON TARGET ACQUISITION AND AIRCRAFT SURVIVABILITY, THE IMPACT OF SIZE AND AGILITY ON AIRCRAFT SURVIVABILITY, AND THE INCREMENTAL EFFECTS OF ENHANCED CUEING. HOWEVER, TO FOCUS THE OBJECTIVES OF THIS TEST ON PURSUING ONLY THESE ISSUES WOULD MAKE THE TEST MORE CONTROLLED AND DEVELOPMENTAL THAN OPERATIONAL. I FIRMLY BELIEVE THAT THE CAS TEST I HAVE PROPOSED WILL PROVIDE INSIGHTS INTO THESE BASIC CAS ISSUES.

IN SUMMARY, OUR CHALLENGE WAS TO DESIGN A TEST THAT WOULD ACCURATELY REFLECT THE ENVIRONMENT WHERE CAS WILL BE PERFORMED. I FEEL CONFIDENT THAT WE HAVE DONE SO.

THANK YOU, MR. CHAIRMAN. I WOULD BE GLAD TO ANSWER ANY QUESTIONS YOU AND THE MEMBERS OF THE SUBCOMMITTEE HAVE.

$45 MILLION FOR TEST PLAN

Senator DIXON. Mr. Krings, the Department of Defense budget contains the $45 million that is required to conduct the test plan, but you say that the Department of Defense does not intend to spend the $45 million on the test plan. Can you explain why not?

Mr. KRINGS. I think in the original document that was sent up to you for my testimony, you will find it has been altered. My expression verbally here is different than that which you hold in your hand.

There was a concern up until fairly recently—when Mr. Kendall and I had a discussion the other day that the money in the DOD budget was for a different test than the test described in the test plan which I submitted to you. At this point I think we have resolved our issues, such that the information that is requested by other organizations within OSD can be extracted from the plan that we have, or that minor alterations to the plan that we have proposed can accommodate the information that the other organizations within OSD want. The expression in my written testimony that I sent up to you earlier about the existence of two test plans is incorrect. There is one test plan.

There are other desires for information to be extracted from that test and I think we have a resolution on how that can be accommodated, either within it, or for slightly additional activity. We have talked to some of your staff very recently about the potential on how that might be done.

Senator DIXON. Are you saying that they will go through with the test plan that you have recommended?

Mr. KRINGS. That is correct.

Mr. KENDALL. If I could comment, Mr. Chairman?

Senator DIXON. I would appreciate an enlightenment on that because it is a little bit unclear here.

Mr. KENDALL. There was, initially, some misunderstanding about the degree of change which my office, in particular, was interested in seeing in the test plan. The test plan, as it is structured, is very well-founded and I want to applaud the work that OT&E has done there. My concern is that as a stated objective of the test we ensure that we collect data that will allow us to address the broader question of CAS.

There are a number of issues that are unresolved despite the many studies that we have done on CAS. And the test provides a unique opportunity to try to resolve those issues. However, if we do not state up front that that is the purpose of the test and ensure that the test is structured to get the data that will resolve those issues, we risk not getting them. I have seen too many tests conducted where at the conclusion of the test we have looked back and said, "Oh, I wish I had done this," "or I wish I had done that." And we did not have the data at that point in time.

So the differences are not one of total test structure, or anything like that. They are more of degree, and how you structure the test, and how you collect the data in the test.

Senator DIXON. Now, as I understand it, there are still some differences to be resolved, is that right?

Mr. **Kendall**. There are some differences, but I would not consider them to be major at this time.

Senator **Dixon**. I wonder if I could ask you, Mr. Kendall, and you, Mr. Krings, to get your staffs together over the next couple of weeks to see if we can work this thing out? I would like to know what information you will develop which can be shared with each other so that both of you get the information you need with a minimum additional amount of testing. I wonder if your staffs could get together with my committee staff on that?

Mr. **Krings**. Absolutely.

Senator **Dixon**. Could we hear in a couple of weeks about that?

Mr. **Krings**. Yes, sir.

Mr. **Kendall**. Yes, sir.

Senator **Dixon**. I can forget about asking about two different test phases then, is that right?

Mr. **Krings**. That is right.

Mr. **Kendall**. Yes, sir, that is right.

Senator **Dixon**. We are at least agreed on that.

Mr. **Kendall**. That is a different question, sir. Two phases or two different tests?

Senator **Dixon**. Two different test phases, two different test plans?

Mr. **Krings**. Two different test plans have been resolved. Therein the singular test plan, there are two phases.

Senator **Dixon**. I sense a degree of uncertainty.

Mr. **Kendall**. The issue of two test phases is a separate issue, Mr. Chairman.

Senator **Dixon**. Do you want to give your statement, Mr. Kendall?

Mr. **Kendall**. Yes, sir.

Senator **Dixon**. I sense some confusion here in this. Please go ahead.

STATEMENT OF FRANK KENDALL, ACTING DEPUTY DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING FOR TACTICAL WARFARE, OFFICE OF THE SECRETARY OF DEFENSE, ACCOMPANIED BY BRIG. GEN. JOSEPH RALSTON, USAF, DIRECTOR OF REQUIREMENTS, U.S. AIR FORCE TACTICAL AIR COMMAND

Mr. **Kendall**. Thank you, Mr. Chairman. My statement will be brief. I will cover a little background, some of last year's activities in the Department, our current direction, what we intend to do with the funds contained in the fiscal year 1990 budget request, and how we are complying with the legislation that is set forth in the Base Closure Act of 1989.

I do not want to redefine CAS and BAI, but the definition of CAS and BAI is at the heart of the matter. In particular, how we satisfy those two requirements, the requirements for CAS and BAI, with the aircraft that we will be procuring over the next several years.

There has been quite a bit of argument in this whole issue in the near term and how we will replace the A-10 aircraft has been very contentious. This subject has been complicated by the fact that the CAS mission and the battlefield air interdiction mission, as they were described by General Otis, are viewed by some as blurred due to the evolving nature of military doctrine and tactics as driven by modern threats. Indeed, there are doctrinal differences between the services. In this case I am referring to the Marine Corps and the Army of how they conduct CAS and BAI.

The CAS issue in the last few years and today is how to best fulfill these needs—CAS and BAI—and whether one should optimize one mission versus the other, or whether these are or should be distinct missions at all.

Going back in time to December 1986, the Air Force proposed to replace the A-10 aircraft with upgraded A-7s and A-16s—a modified F-16. While the A-7 upgrade prototype work was approved by the Secretary of Defense, the A-16 solution was tabled, pending comprehensive design studies by industry and government evaluations of additional alternatives, such as new aircraft, or modified aircraft other than the A-16. During the period of May 1988 to October 1988, the finalized industry designs were evaluated by a number of studies.

As we reported to you last year, a DOD oversight group, called the Close Air Support Mission Area Review Group, or CASMARG, was formed to oversee the studies and other related activities. I currently chair that group. My predecessor, Mr. Don Fredericksen, shortly before he left the Pentagon, provided the Secretary with recommendations based on the group's work. As a result of these activities, and in particular, as a result of Mr. Fredericksen's recommendations, we obtained valuable insights that helped us formulate our plans as they are reflected in the fiscal years 1990 and 1991 adjusted budget submission.

That is not to say that no issues remain. I will mention some of them in a moment.

Our plan is to proceed with a near-term and a longer term solution. The near-term solution addresses the immediate problem of how to replace the A-10 aircraft. That solution, as funded in the budget, involves upgrades of both existing F-16s and existing A-10s. We have budgeted funds to begin modification of 225 A-10 aircraft, and 146 F-16s. Again, the F-16s are not new production aircraft. They are existing aircraft.

Modifications include inclusion of an automatic target handoff system, a digital terrain system, inclusion of a laser spotter, the Pave Penny, further work on the 30-millimeter gun pod, and hardening of the F-16 aircraft. For night capability we are looking at a number of options, such as head steerable FLIRS, and the budget contains development funding for that purpose.

Each of the above subsystems was identified as having high payoff during the course of our studies and was recommended by the CASMARG.

To formalize the undertaking of these activities, a mission need statement has been prepared, and formal milestone reviews are planned. We expect to have a DAB review, a Defense Acquisition Board review, of CAS later this summer.

Over the next year we will be considering additional modified aircraft for inclusion in the amended fiscal year 1991 or the fiscal year 1992 budget submission that still is addressing the short-term requirement. For the longer term we may still need a new aircraft. By far the most important consideration for this will be threat evolution and budget constraints. Additionally, there are still unresolved questions which should be answered prior to undertaking a decision for a new aircraft, or even for additional modifications to existing aircraft.

And this brings me to the subject of the congressionally directed test plan. Mr. Krings has covered that in a fair amount of detail. I want to state that we would like as a fundamental test objective to resolve questions which derive critical parameters identified in our earlier aircraft alternative studies.

Despite all the many studies, critical trades between altitude, speed, hardness, survivability, and effectiveness have not been definitized. And that is a result of some of the uncertainty that exists with our models and with the assumptions that go into our models. We need to collect some parametric data that will help us understand the relationships among these variables with more confidence. Proponents of various CAS solutions tend to focus on one or the other of these variables as dominant to the exclusion of the others.

With regard to the remainder of the congressional tasking, the Secretary of Defense has tasked the JCS to assess the CAS roles and missions question by December 31, 1989. DOD will report to Congress shortly thereafter.

The JCS was also tasked to review the operative joint document for CAS and BAI, called the mission requirements package, or MRP. This has been the basis for most of the studies. It is also the basis for the test plan to some degree. This package was prepared jointly by the Army and Air Force prior to the conduct of the studies, as I mentioned, and was used by industry to arrive at their designs and subsequently for the evaluation of the designs.

The Secretary has also tasked the JCS to review the industry solutions and notify him as to which ones would meet the MRP requirements.

We expect the joint staff will be reporting very soon on the roles and missions questions. I also understand that they are about halfway through evaluating which aircraft would meet the requirements identified in the MRP.

To conclude, we have identified a near-term approach for CAS follow-on and have requested funds in our budget. Test planning is well underway, and except for the minor differences that still exist, I think it is just about resolved. We are addressing the roles and missions questions, and we are moving positively in accordance with the direction that has been provided by Congress.

Thank you, Mr. Chairman, I would be happy to take your questions.

[The prepared statement of Mr. Kendall follows:]

STATEMENT BY

MR. FRANK KENDALL

ACTING DEPUTY DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING FOR TACTICAL WARFARE PROGRAMS

Mr. Chairman, thank you for the opportunity to discuss the Department's Close Air Support (CAS) program. I am Frank Kendall, Acting Deputy Director of Defense Research and Engineering for Tactical Warfare Programs. Accompanying me, in addition to Mr. Jack Krings, Director of Operational Test and Evaluation, are BGen Joseph Ralston from Tactical Air Command, and representatives of the Army and Marine Corps.

My statement today is brief. I will cover a little background, some of the last year's activities in DoD, our current direction, what we intend to do with the funds contained in the FY90 budget request and how we are complying with the legislation set forth in the Base Closure Act of 1989.

By way of background, I would like to start by defining CAS and Battlefield Air Interdiction: CAS is "air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces". Battlefield Air Interdiction (BAI) on the other hand is "air interdiction attacks against land targets which have a near-term effect on the operations or scheme of maneuver of friendly forces, but are not in close proximity to friendly forces". Translated into operational terms CAS requires detection and identification of individual enemy targets while BAI requires detection of targets in areas known to contain no friendly units. These requirements and their technical and operational implications tend to lead to different design criteria. Clearly both capabilities are required. What the department has been wrestling with for some time is how to best provide both capabilities.

As you know the immediate subject of how to best replace the Air Force A-10 aircraft has been contentious. This subject has been complicated by the fact that CAS mission and the Battlefield Air Interdiction mission, as described above, are viewed by some as blurred due to the evolving nature of military doctrine and tactics as driven by modern threats. Indeed there are doctrinal differences between the Services. The CAS issue in the last few years and today is how to best fill these needs and whether one should optimize one mission versus the other or whether these are or should be distinct missions at all.

Going back in time to December 1986, the Air Force proposed to replace the A-10 with upgraded A-7s and A-16s, a modified F-16. While the A-7 upgrade prototype work was approved by the Secretary of Defense, the A-16 solution was tabled, pending comprehensive design studies by industry and government evaluations of additional alternatives, such as new aircraft or modified aircraft other than the A-16. During the period of May 1988 to October 1988, the finalized industry designs were evaluated by a number of studies. As we reported to you last year, a DoD oversight group called the Close Air Support Mission Area Review Group (CASMARG) was formed to oversee the studies and other related activities. I currently chair that group. My predecessor, Mr. Don Fredericksen, shortly before he left the Pentagon, provided the Secretary with recommendations based on the group's work.

As a result of these activities, we obtained valuable insights that helped us formulate our plans as reflected in the FY 1990 and 91 Adjusted Budget Submission. That is not to say that no issues remain. I will mention some of them in a moment.

Our plan is to proceed with a near term and a longer term solution. The near term solution involves upgrades of both the F-16 and A-10. We have budgeted funds to begin modification of 225 A-10 aircraft and 146 F-16's. The F-16s are not new production aircraft.

Modifications include inclusion of an Automatic Target Handoff System, a Digital Terrain System, inclusion of a Laser Spotter (Pave Penny), further work on the 30mm gun pod and hardening of the F-16 aircraft. For night capability we are looking at a number of options such as head steerable FLIRS and the budget contains development funding for that purpose. Each of the above subsystems was identified as having high payoff during the course of our studies and was recommended by the CASMARG.

To formalize the undertaking of these activities, a mission need statement (MNS) has been prepared and formal milestone reviews are planned. We expect to have a DAB review this summer. Over the next year we will be considering additional modified aircraft for inclusion in an amended FY 91 or the FY 92 budget submission.

For the longer term we may still need a new aircraft - by far the most important considerations for this will be threat evolution and budget constraints. Additionally, there are still unresolved questions which should be answered prior to undertaking a decision for a new aircraft or additional modifications to existing aircraft.

This brings me to the subject of the congressionally directed test plan - Mr. Krings is covering it in detail, but I want to state that we would like as a fundamental test objective to resolve questions which drive critical parameters identified in our earlier aircraft alternative studies. Despite all the many studies, critical trades between altitude, speed, hardness, survivability, and effectiveness have not been definitized. We need to collect parametric data that will help us understand the relationships among these variables with more confidence. Proponents of various CAS "solutions" tend to focus on one of these variables as dominant to the exclusion of the others.

With regards to the remainder of the Congressional tasking, the SecDef tasked the JCS to assess the CAS roles and missions question by December 31, 1989. DoD will report to Congress shortly thereafter. JCS was also tasked to review the operative joint document for CAS and BAI called the Mission Requirements Package (MRP). This package was prepared jointly by the Army and Air Force prior to the conduct of the studies and was used by industry to arrive at their designs and subsequently for the evaluation of the designs. The SecDef also tasked JCS to review the industry solutions and notify him as to which ones meet the MRP. We expect that the Joint Staff will be reporting very soon on the roles and missions questions. I also understand that they are about half way through evaluating which aircraft meet the requirements identified in the MRP.

To conclude, we've identified a near term approach for a CAS follow-on and have requested funds in our budget. Test planning is well underway. We are addressing the roles and mission questions and are moving positively in accordance with the direction that has been provided by Congress.

Senator **Dixon**. Thank you, Mr. Kendall. Now I do have the assurance of both of you then that your staffs will work together to get a better understanding of exactly what is contemplated and get back to our committee staff? Is that right?

Let me walk through some things here with you.

TWO PHASES OF TEST PLAN

Mr. Krings, why do you believe it is necessary to have two phases in your test plan?

Mr. **Krings**. Because we think that, we believe that a short-range answer can be made that could conceivably save a lot of dollars. If we do the first phase of the test in the one that we are talking about in 12 to 18 months, we maybe gain enough insight that we really have not lost any time or any money, but it could conceivably preclude a significant investment in time and money before we have any answer at all. Were we to modify aircraft and then do only a competitive flyoff with modified aircraft, we would literally have to wait 3½ to 4 years to get an answer, and the answer then may be we have wasted 3½ to 4 years and $250 million.

We feel that a shorter term answer, with a significant payoff, can be done in a short period of time, and that is why we basically split it into two tests. One that can be done more quickly and conceivably answer the question. And then if there is still a remaining question, to do the second half of the test, basically.

Senator **Dixon**. The staff of the committee was told that it was necessary to have two phases because the Air Force does not have an aircraft that could conduct nighttime operations, and that you have to delay the full test until they can get a nighttime CAS aircraft. Is that the case?

Mr. **Krings**. If you want to do night CAS with an Air Force airplane, you will have to wait until that point in time, because there will not be, to the best of my knowledge, and the Air Force could obviously answer this better. To the best of our knowledge there will not be a night CAS capable aircraft until significant modification is made.

Senator **Dixon**. It is possible to incorporate a number of nighttime scenarios in Phase One?

Mr. **Krings**. We are of the impression we can do limited night scenarios to assess what the potential of night CAS is. Obviously, there are other aircraft that are not included in this test at this point in time that conceivably can do night CAS. We are essentially providing the environment, and should other aircraft that are capable of doing night CAS be added to that list, we could look at night CAS.

Senator **Dixon**. General Otis, of course, has just said night CAS is critical, has he not?

Mr. **Krings**. That is correct.

Senator **Dixon**. Stressed it all through his testimony.

Mr. **Krings**. And we agree with him. Yes.

Mr. **Kendall**. If I could add something with regard to the two phases of the test and how the Department plans to proceed.

We do not have funding in the 5-Year Defense Plan for the second phase of the test at this time. We plan to conduct a first-phase test that will do the things, essentially, that Mr. Krings mentioned. But we have not, at this time, budgeted for the second phase. We would like to not have to take 4 or 5 years and several hundred million dollars to resolve this issue of the near-term solution for CAS. We would like to resolve it much more quickly than that.

We, as I think some of the members of the committee indicated, share a sense of urgency about this entire mission. We will be looking at the test program, and how we will be making that decision through the Defense Acquisition Board this summer. The modifications to the test program may be considered at that time. The need for a second phase will certainly be considered at that time, and we will be making recommendations to the Secretary thereafter.

Senator DIXON. And in all these things if you would keep in touch with our committee staff, and keep on having this communication, we would appreciate it.

Mr. KENDALL. Be happy to do that.

AIRCRAFT EVALUATION

Senator DIXON. The test plan calls for evaluating the A-10, an upgraded A-10, and an A-16 in the Phase One, is that right?

Mr. KRINGS. That is correct.

Senator DIXON. Then two of those three, eliminating one of the three, would be compared in a Phase Two against other CAS aircraft such as the AV-8B, is that right?

Mr. KRINGS. The determination——

Senator DIXON. We shut it now?

Mr. KRINGS. Yes. Now, the determination would be if it is reasonable and affordable to upgrade those aircraft before we would commit to the second test.

Senator DIXON. Why do you not evaluate the AV-8B in Phase One?

Mr. KRINGS. The AV-8B night attack version is capable of performing night CAS. To keep that cost down, we did not recommend it in the Phase One test. We recommended the environment in which they are going to be tested. Essentially, we own the car wash. You can drive anything you want through it, but it is a CAS car wash, and you can bring anything to it you want to. It will cost an additional $4.5 million per aircraft type that is added to the test.

Senator DIXON. The test plan states responsiveness will not be tested in Phase One, and I presume that this means the responsiveness of CAS to Army tasking, is that right?

Mr. KRINGS. The responsiveness segment that we are discussing is part of that. It is the time that it takes, essentially, to get the message through the system and for the aircraft to reach the area in which the CAS is going to be employed.

Senator DIXON. I guess the question is, why not test it in Phase Two?

Mr. KRINGS. Most of that we feel, and the people who put the test together feel, that information on responsiveness is available from many field exercises. And to look at the range of aircraft and the various ways that they would respond, we felt was not what the CAS question was, and would extend the test significantly. I think that responsiveness can be reasonably estimated and determined from other sources that would be far less expensive than establishing a test that extended the whole circuit from when the CAS is requested all the way through the command system in the response.

ARMY TO PLAN AND CONDUCT CAS TEST

Senator DIXON. You say in your written statement that the Air Force does not want the Army to plan and conduct the CAS test. Why did you want the Army to plan and conduct the test?

Mr. KRINGS. First, it is on an Army base, which helps significantly if the Army is running the test on their own base. And second, they are the recipients of CAS, and I think the Air Force should be allowed to respond as they would normally respond. The Army will not tell them how to respond. The Army will tell them basically what their request is and to set up the situation on the ground when the Army would ask for it.

Another reason, also, is the Army has considerable experience recently in many operational tests in which they are on the other side of CAS, that is, they are the air defenders. So they have put together many tests that are very much like this CAS test, when they are evaluating their air defense systems against red force CAS.

Senator DIXON. Do you have any reason to question either the objectivity or the complements of the Army test community to conduct these tests, Mr. Krings?

Mr. KRINGS. No, I do not. And again, I might add that they really are not going to be in any way, shape, or form the decider of what the CAS aircraft might be. That is clearly the Air Force's role. Their role is to find out whether or not it accomplishes what they have asked for.

Senator DIXON. General Ralston, I am not trying to put you on the spot, but if the Air Force says that the Army is a client and it is doing all they can to help the Army, why are you not willing to let the Army conduct the test?

General RALSTON. Well, Senator, I think the issue that has been referred to was internal deliberations within the Department of Defense. If the DOD decides that the Army should be the test director, the Air Force will fully support that test.

Senator DIXON. Excuse me. I see that the distinguished chairman of the subcommittee is now here. I am going to yield to him and excuse myself from the room for a moment. The distinguished Senator from Michigan.

Senator LEVIN [presiding]. Thank you, Senator Dixon. Good afternoon.

Mr. KRINGS. Good afternoon, sir.

TRADEOFF UNCERTAINTIES

Senator LEVIN. In the written statement which has been presented, the statement is made that despite all of the many studies, critical trades between altitude, speed, hardness, survivability, and effectiveness have not been definitized. My question is, how can we have made so many studies of close air support over the years—I think there are 28 of them according to the Air Force—and still not have resolved fundamental uncertainties about that tradeoff?

Mr. KENDALL. If you go back through all the studies, there are sets of assumptions made in the case of each study. Some of those studies assume that all the aircraft, independent of speed, operate at a certain altitude floor, and that may not be a realistic assumption. If you look at assumptions about the manned portable air defense systems and their effectiveness in the battlefield, there are a variety of assumptions about those. If you look at assumptions about enemy air and its impact on the battle, there are a variety of assumptions about those things.

We have a number of things that we can only resolve through testing in order to anchor our current simulations. We have never done this sort of an operational test, and we have never had a conflict where we operated in this sort of an environment. And so we are dealing with a lot of uncertainty in this whole area of simulations with this type of conflict. For those reasons we think we need to go out and get the test data that will help anchor those simulations so we can make better judgments in the future.

UPGRADING AIRCRAFT

Senator LEVIN. You noted in your statement, I believe, Mr. Kendall, that the budget contains a plan to upgrade a couple of hundred A-10s, and 146 other F-16s to give them features which are useful for close air support. Was that approach recommended in any study, any of those 28 studies?

Mr. KENDALL. The studies all addressed varieties of aircraft to do the CAS mission. They did not look at specific procurement options for the Department of Defense. That was done separately.

Senator LEVIN. Did any look at procurement options for the Defense Department to come up with this recommendation? Was this the product of a study?

Mr. KENDALL. It was a product of the collected studies and activities of the CASMARG, the DOD chartered group, which was responsible for oversight of all the CAS activities. And it was concurred in by the group.

Senator LEVIN. Does that mean that no discrete, identifiable study made this recommendation?

Mr. KENDALL. No. It was a result of the DRB process. A number of options were prepared for the Defense Resources Board, different procurement options, and this one was selected.

Senator LEVIN. Then the answer would be there was no discrete study which preceded it?

Mr. KENDALL. I cannot point to a study, per se, that yielded this, no.

MAVERICK MISSILE

Senator LEVIN. The Air Force is posing to terminate the Maverick missile which I think is the only guaranteed tank killer you have in your inventory, even though you have only purchased about one-third of the requirement for that missile. Why are you doing this if you are continuing close air support?

General **Ralston**. I do not want to get into specific numbers here in this particular forum, but we have over 40 percent of our requirement. We would like to have more, but fiscal realities dictate that we had to make some cuts. We are not happy about that. We would like to have some more, but those are the fiscal realities we are under.

Senator **Levin**. Was that cut part of the most recent budget presentation, or was that in President Reagan's budget presentation?

General **Ralston**. I will have to provide that for the record.

[The information follows:]

MAVERICK

The Maverick budget cut was made in President Reagan's budget presentation.

Senator **Levin**. Senator Dixon has requested that you, Mr. Krings and Mr. Kendall, have your staffs get together over the next 3 weeks to see if a compromise can be worked out. We will have our staff work with your staffs during that 3-week period to see if there can be a resolution.

Mr. **Kendall**. That would be fine, Mr. Chairman.

Senator **Levin**. The record will stay open for any additional questions.

Thank you all for coming.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JOHN McCAIN

CLOSE AIR SUPPORT

Senator **McCain**. What expenditures are currently planned on close air support in the current FYDP? Please show expenditures by aircraft, weapons systems, and munitions for each year.

General **Ralston**. Isolating the funding in the FYDP specifically for expenditures on CAS is not possible because weapon systems support multiple missions in varying proportions. Close air support is a function of allocating airpower to support Army maneuver forces and as such is not airframe dependent. In order to convey the full range of options, included are FYDP expenditures for all the aircraft and systems that perform CAS. As you are aware, Air Force planning guidelines follow this same rationale; i.e., the mix of aircraft for the tactical air forces today for air-to-ground, air-to-air, and multirole are approximately:

Air-to-ground 35 percent.
Air-to-air 20 percent.
Multirole 45 percent.

CAS CAPABLE SYSTEMS EXPENDITURES

	Fiscal year—				
	1990	1991	1992	1993	1994
A-7	104.4	43.6	43.2	39.5	24.3
YA-7F	24.2	4.9	0	0	0
A-10	434.1	406.2	406.1	409.5	364.8
F-16 CAS prog	56.8	48.6	20.6	120.4	173.9
Night attack	8.0	6.0	24.0	60.0	50.0
OA-10	6.0	7.4	9.4	9.7	12.2
OA-37	.5	.7	.4	.3	.3
OV-10	3.1	4.3	3.8	1.5	1.2
FAC O&M	27.5	30.8	31.5	32.7	33.7
LANTIRN	302.6	264.2	34.2	9.4	9.6

CAS CAPABLE SYSTEMS EXPENDITURES—Continued

	Fiscal year—				
	1990	1991	1992	1993	1994
F-4	123.8	69.8	24.0	0	0
F-16 proc	3602.4	3361.8	3312.7	3331.4	3630.6
F-16 squad	1176.0	1221.2	1286.3	1331.1	1410.7
F-16 other mods	231.2	284.7	349.6	379.8	453.9
Total	6100.6	5754.2	5545.8	5725.3	6165.2

Munitions are even more difficult to isolate. Many munitions are used for CAS and interdiction. For example, the same type of weapons may be used on one mission to stop a tank at the FEBA and on another mission to interdict second echelon tanks. Therefore, a list of all tactical weapons being developed or procured which can be of direct benefit to CAS/BAI is included.

Senator McCAIN. What expenditures are currently planned on interdiction and other offensive air capabilities in the current FYDP? Please show expenditures by aircraft, weapons systems, and munitions for each year.

General RALSTON. The current interdiction assets in the tactical air forces are the F-111 and F-15E, with the ATA in development stages. Expenditures across the FYDP are:

	Fiscal year—				
	1990	1991	1992	1993	1994
ATA	[Deleted]	[Deleted]	[Deleted]	[Deleted]	[Deleted]
F-15E [1]	1745.3	2994.9	625.9	609.9	1266.6
F-111	556.8	516.1	632.2	572.5	576.4
Total	[Deleted]	[Deleted]	[Deleted]	[Deleted]	[Deleted]

[1] Although the F-15E has offensive air capabilities, its primary mission is interdiction.

Offensive Air: Although most tactical aircraft possess some degree of air-to-air capability, those aircraft listed below are the USAF's primary offensive air capable aircraft.

Cost include procurement, modifications, personnel, RDT&E, O&M, spares, etc. Cost do not include staffs, log support, O&M, or the command and control systems specifically designed to support offensive air.

	Fiscal year—				
	1990	1991	1992	1993	1994
F-15	1246.2	1188.7	1239.9	1210.6	1177.8
ATF	1120.9	1602.9	1755.6	2490.5	3303.6
Total	2367.1	2791.6	2295.5	3701.1	4481.4

Munitions (Interdiction/Air-to-Air): The munitions to support the interdiction mission are the same munitions listed in answer to previous question. In addition, air-to-air munitions include:

	Fiscal year—				
	1990	1991	1992	1993	1994
AMRAAM	949.7	965.2	683.4	629.9	593.1
ASRAAM	5.4	7.0	4.0	19.5	16.9
AIM-7	4.0	2.6	5.1	5.3	5.6
AIM-9	8.7	7.1	11.2	11.6	11.8
Total	967.8	981.9	703.7	666.3	627.4

Total of all CAS/BAI capable tactical weapons being developed or procurred (does not include personnel, construction, actual expenditures, maintenance of existing weapons, or training ordnance):

Weapon	Fiscal year—				
	1990	1991	1992	1993	1994
HVM	8.3	6.2	6.0	11.6	19.2
20MM	3.3	3.4	3.5	3.6	3.7
Maverick	211.5	189.0	187.7	.7	.5
I-2000	0	26.4	33.4	34.3	35.1
CEM	156.6	141.8	131.4	126.0	0
SFW	25.1	70.4	138.2	248.1	356.4
GBU-15/AGM-130	33.3	42.6	57.6	42.5	45.5
Total	438.1	479.8	557.8	466.8	460.4

Senator **McCain**. To what extent are current close air support (CAS) development and procurement efforts dependent on currently planned funding levels in the FYDP? How would these efforts change if funding levels were cut by 20 percent?

Mr. **Krings**. The impact of a 20-percent funding reduction would depend on how the cut was made. There are currently six programs in the FYDP. These are: (1) enhance 146 Block 30 F-16s for CAS and BAI missions; (2) enhance 225 A-10s for CAS; (3) an A/OA-10 technology demonstration program to evaluate improvements for the A-10 and the OA-10; (4) a program to develop night systems for the CAS aircraft; (5) completing the A-7 plus prototype flight test program; and (6) an operational test program to evaluate the effectiveness of CAS aircraft. An across-the-board reduction of 20 percent would imply that these programs simply stretch out a year. However, in actuality we would have to assess each of these programs in more detail to determine if they remain viable. Taking the total reduction in only one or two programs would terminate that effort and cause us to loose a capability we need.

Senator **McCain**. Given the broad scope of the proposed test and evaluation activity, why should we modify the A-10 and F-16 until these tests are complete and we can develop an overall close air support strategy?

General **Ralston**. Regardless of the outcome of the operational test, the A-10 and F-16 are planned as the primary close air support aircraft through the end of the century. The modifications planned for these aircraft are primarily avionics-oriented and designed to improve our existing Army systems. For example, the Automatic Target Handoff System is currently installed in Army helicopters and used in artillery units. Our aircraft must be modified to ensure our interoperability with these Army systems. Since a new aircraft would not come on line for another 8 to 10 years or more, failure to pursue modifications to our A-10s and a number of our F-16s now will cause us to fall behind in our ability to interoperate with and support [illegible] Army in the 1990s.

Senator **McCain**. How would current priorities for CAS be affected if President Bush's arms reduction proposals for Europe were accepted?

Mr. **Krings**. We would still have a requirement for CAS. However, the exact priorities, aircraft capabilities, and quantities will depend on how the force reductions are made. We are still evaluating our options in this area.

Senator **McCain**. What would the incremental cost be of including the AV-8B in the test? What action would be required to include the AV-8B in the test? What benefits could we gain in terms of improved understanding of its operational capabilities even if it is not selected?

Mr. **Krings**. The cost of including any additional aircraft in the CAS operational test is $4.5 million per aircraft type. The AV-8B could be included by direction of the Secretary of Defense or Congress. The CAS operational test will allow an unbiased assessment of participating aircraft as they perform the CAS mission against a common threat and target base. The relative effectiveness of each participant will be measured in terms of their effectiveness in killing assigned targets and their ability to survive getting to and from the target. The aircraft will be tested in an European scenario with varying degrees of air defense lethality. The AV-8B is equipped to perform night CAS which the Air Force currently can do only by illuminating the battlefield. Including the AV-8B in the CAS test would provide valuable insights into the capability of an aircraft of its size and agility to perform the CAS mission both day and night.

[Wherefore, the committee was adjourned at 3:40 p.m.]

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